Working paper

An exploration of bilateral development finance institutions' business models

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Key messages[1]

To varying degrees, all the development finance institutions (DFIs) studied in this paper have room to increase the level of risk in their investment portfolios without recourse to new capital injections or increased use of donor external concessional resources. Of note, the level of risk in the portfolios of FMO and Proparco seems to be lower than what might be reasonably expected of a DFI. For BII we observe that the level of risk may not be as high as it could be.

The value of FMO and Proparco targeting a self-imposed AAA and AA rating respectively is unclear. It requires these DFIs to sustain levels of risk, capital adequacy and liquidity that ensure an almost zero risk of default on their financial obligations. These levels, which in addition seem to be exceeding the requirements for such ratings, contribute to the above key message and, overall, to the underutilisation of their capital. Other 'insight' institutions who issue

[1] These key messages are tentative due to data limitations. Further data and study would be required to understand and model these issues more concretely, especially from a quantitative perspective. Throughout the study we have identified where further analysis is required. Our reflections are presented here to encourage and facilitate discussion between DFIs and their shareholders.

debt on the capital markets have successfully operated with lower ratings, enabling a higher level of risk to be taken and have reported a higher return on equity. All studied DFIs should use their own balance sheets more effectively, which would enable them to increase their portfolios and the level of risk taken without the need for new capital injections in the first instance. The DFIs overall present limited to no leverage through debt directly issued in the market, high capital adequacy ratios and in some cases excessive liquidity levels.

The study has identified possible oversized cost structures (except for Norfund), a lack of or ineffective use of pricing models and potentially weak approaches to equity investments. Consequently, profitability might have been lower than it could have been, limiting the DFIs' investment capacity, risk-taking level and utilisation of their capital base.

Mobilisation levels and ratios are low, the latter ranging from 0.1 to 1.5 during the period studied. The DFIs' approach to mobilisation has been slow to evolve. DFIs rely on traditional approaches and make limited use of structuring techniques and instruments with high mobilisation potential, and they have limited appetite to manage third-party assets. Internal incentives based on investment commitment volumes/approvals are in tension with mobilisation, especially when deal flow is limited.

Overall, the studied DFIs seem not to be entirely aligned with governance best practices. In particular, the capacities and practices of internal controls seem overall to be insufficient.

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Acronyms

2030 Agenda	2030 Agenda for Sustainable Development
AFD	Agence Française de Développement
BDMG	Banco de Desenvolvimento de Minas Gerais
BII	British International Investment (formerly CDC Group)
BUILD Act	Better Utilization of Investments Leading to Development (BUILD) Act
CEO	Chief Executive Officer
CET1	Common Equity Tier 1
CFO	Chief Finance Officer
CRO	Chief Risk Officer
ECB	European Central Bank
DEG	Deutsche Investitions- und Entwicklungsgesellschaft
DFI	development finance institution
DFC	US International Development Finance Corporation
EAIF	Emerging Africa Infrastructure Fund
FI	financial institution
FMO	Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V.
FMO IM	FMO Investment Management BV
KfW	KfW Bankengruppe
LDCs	least developed countries
LICs	low-income countries
LMICs	Low- and middle-income countries
MDBs	multilateral development banks
ODA	official development assistance
OPIC	Overseas Private Investment Corporation (now merged into DFC)
PIDG	Private Infrastructure Development Group
SDGs	Sustainable Development Goals
SMEs	small- and medium-sized enterprises

TDB	Eastern and Southern African Trade and Development Bank

Executive summary

In 2015, a new era for development finance institutions (DFIs) was ushered in, one where DFIs are now expected to mobilise vast sums of private capital to help close the Sustainable Development Goals (SDG) financing gap, as well as make transformative investment to pioneer and create new markets. Progress with these agendas had been slow prior to the Covid-19 pandemic, and prospects for advancement subsequently do not look great: multiple crises have since combined to exacerbate the SDG financing need, while also straining traditional sources of national and international public development finance.

In this context, DFIs have come under increasing pressure to materially scale their investment and mobilisation; increase their risk appetite to help ignite growth in the poorest countries; and remain profitable. But DFI business models have been slow to evolve. Bold action by shareholders and their DFIs will be required to change DFI investment strategies, approaches and products, and make the necessary adjustments to financial and risk management, with consequent implications for DFI business models.

DFIs are diverse. Their governance, objectives, business models and funding differ, with varying implications for their ability to meet these new ambitious ‘asks’. This working paper is a first attempt to help build a better understanding of the diverse range of business models of bilateral DFIs, and to offer some initial reflections on what these models may mean for the ability of DFIs to increase their risk appetite and scale investment volumes and mobilisation levels.

We study six bilateral DFIs (British International Investment (BII), Deutsche Investitions- und Entwicklungsgesellschaft (DEG), the US International Development Finance Corporation (DFC), Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V. (FMO), Norfund and Proparco) and three ‘insight’ institutions (Banco de Desenvolvimento de Minas Gerais (BDMG), the Private Infrastructure Development Group (PIDG) and the Eastern and Southern Africa Trade and Development Bank (TDB)). The latter are included for reference, as we believe that they offer ‘insight’ on effective practices which are relevant to the study. This working paper provides a technical analysis of DFI business models and concludes by considering what this technical analysis means for policy-makers and DFI shareholders.

In our conclusion we identify three policy issues relevant to considering the current fiscal squeeze and pressure on official development assistance (ODA) budgets in many donor countries, and we offer some tentative reflections and recommendations. In doing so, we caution that these qualitative reflections are limited by the availability of data. Further data and study would be required to understand and model these issues more concretely, especially from a quantitative perspective. Our study should not be interpreted as definitive. Our reflections and recommendations are presented here to inform, encourage and facilitate discussion between DFIs and their shareholders.

Key policy issues and recommendations

Policy question 1: Is there room to increase the risk appetite of the studied DFIs and increase their levels of high-risk investment without recourse to new capital injection or use of more external concessional funds which can be counted as ODA?

Yes. Our study finds that, to varying degrees, all our studied DFIs can potentially increase their risk appetite and their levels of high-risk investment without adversely impacting the business model or recourse to new funding and/or use of increased donor concessional finance.

Of note, we observe that Norfund, DFC and DEG take a level of risk that has the potential to result in high additionality. For BII we note its high use of equity investments, which has the potential to result in high additionality, but observe that the level of risk in the portfolio may not be as high as it could be. FMO and Proparco seem to be taking a lower level of risk. For FMO we observe an extremely conservative approach to risk appetite, capital adequacy and liquidity, which in our opinion exceeds what is required for a self-imposed AAA credit rating, limiting its risk appetite. Likewise, we believe there is potentially room for Proparco, which targets an AA rating, to increase its risk appetite.

We question the value of FMO targeting a self-imposed AAA rating and Proparco targeting an AA rating. Targeting these ratings requires these institutions to sustain levels of risk, capitalisation and liquidity that ensure almost zero risk of default on their financial obligations. These levels, which in addition seem to exceed the requirements for such ratings, contribute to our above observation. The ‘insight’ institutions in this study have successfully operated at lower ratings, enabling a higher level of risk to be taken, and have reported higher return on equity.

Recommendations

Shareholders of all studied DFIs should open a conversation on risk appetite and risk management to better understand the current headroom to increase the level of risk in investment portfolios.

FMO and Proparco and their shareholders should open a conversation to explore the risk and impact opportunities of targeting a lower credit rating than AAA and AA respectively.

All studied DFIs have room to increase the risk in their portfolios. This would require the implementation of risk management best practices applied in mainstream financial markets, in alignment with the necessary level of risk to achieve developmental objectives and implementing (i) appropriate risk governance, (ii) reasonable self-imposed ratings when applicable (and without exceeding the corresponding rating-level requirements), and (iii) effective use of capital.

Policy question 2: Given stretched ODA budgets and a fiscally constrained policy environment, can the studied DFI investment volumes increase without recourse to new capital injections?

Yes. We believe that DFIs should use their own balance sheets more effectively, which would provide the potential for increasing their portfolios and the level of risk taken, without the need for new capital injection in the first instance. The studied DFIs overall present limited to no leverage through debt directly issued in the market, high capital adequacy ratios and excessive liquidity levels in some cases, revealing that there is a missed opportunity to increment the size of portfolios, take additional risks and increase capital mobilisation from various sources. Our studied DFIs could learn from TDB's effective management of its capital and innovative balance sheet operations.

Our study identifies possible oversized cost structures (except for Norfund), a lack or ineffective use of pricing models, and/or potentially weak approaches to equity investments. Consequently, the DFIs' profitability might have been lower than it could feasibly have been, therefore limiting their investment capacity, risk-taking level and utilisation of their capital base.

Of note, considering the scale of need, we question the missed opportunity of BII, DFC and Norfund to mobilise significant volumes of private capital into their balance sheets by issuing debt in the capital markets (targeting a credit rating that would maximise the use of their own capital while allowing them to take the necessary level of risk). We note FMO's extremely conservative approach to leverage, capital adequacy and liquidity, which constrains investment volumes. In relation to DEG and Proparco, the study does not assess the degree of the use of capital by the corresponding groups of which they are part. However, under the hypothetical scenario that DEG's

current debt financing (entirely provided by KfW) would instead be represented by debt raised in the market, its leverage would be even lower than FMO's.

Recommendations

Shareholders of BII, DFC and Norfund should explore the risks and opportunities, including increased impact, of allowing these DFIs to issue debt and leverage their balance sheets.

FMO should calibrate its level of leverage, capital adequacy and liquidity, in consideration of a revised rating level (per our recommendation in policy question 1) or at least without exceeding the requirements of an AAA rating.

DEG and Proparco should explore, with their corresponding controlling entities, options to raise debt in the market under DEG and Proparco's balance sheets and other ways to make more effective use of their capital.

Policy question 3: How can our studied DFIs boost their mobilisation efforts?

Seven years into the 2030 Agenda, mobilisation ratios and levels are low, reflecting the fact that international ambition has been slow to percolate into the studied DFIs' objectives and strategies. For our DFIs, mobilisation ratios range from 0.1 to 1.5 during the period under study, and are low compared to catalytic impact funds, which typically leverage three to four times their catalytic capital.

Our studied DFIs focus mainly on their role as a principal investor rather than a mobilising intermediary. As such, we observe a reliance on traditional approaches, limited use of structuring techniques, limited appetite to manage third-party assets and funds, and limited use of instruments such as guarantees which have high mobilisation potential. Further, we observe that internal incentives which focus on investment volumes committed or approved are in tension with mobilisation objectives, especially where deal flow is more limited.

There also appears to be a case for more nuanced thinking and approaches to mobilisation, and for shareholders to set differentiated objectives in different markets depending on the target geographies of their DFIs. This nuance is required as, in some markets, it may be more challenging to mobilise commercial investment at scale, at least in the short term. In these markets it will be important to better understand the market creation effects of DFI investment, which can create the conditions for much greater commercial mobilisation down the line.

There is a complete lack of transparency in mobilisation data, which hinders accountability and analysis of effectiveness, and ultimately thwarts effective policy-making.

Recommendations

Shareholders should set mobilisation as a strategic priority for their DFIs (including differentiated mobilisation objectives in different markets). DFIs should develop mobilisation strategies, set associated key performance indicators (KPIs) and undertake more active structuring of investment to mobilise.

DFIs and their shareholders need to review internal implicit and explicit incentives to ensure that they are aligned with strategic priorities on mobilisation.

DFI shareholders should ensure that their DFIs publish consistent and comparable disaggregated mobilisation data by project.

Overall governance: reflections and recommendations

The governance of DFIs is a key determinant of their approach to taking risks, offering financial products that can result in high additionality, maximising capital utilisation, attaining a reasonable cost structure and profitability, and mobilising capital.

A cursory look at the governance of the studied DFIs suggests that they do not seem to be entirely aligned with governance best practices in some key areas. Capacity and practices of internal controls seem overall to be particularly insufficient.

Recommendations

Shareholders should consider (i) increased contributions from independent Board members, possessing applicable skills and expertise; (ii) strengthened practices of internal controls, especially in relation to independence; and (iii) more effective checks and balances, with improved practices in relation to processes and to the organisational positioning and authority of the following bodies: internal audit department, Chief Risk Officer (CRO), Chief Finance Officer (CFO), risk management committee and independent mechanisms.

1 Introduction

With the advent of the SDGs in 2015, the international community assigned DFIs a critical new role. A new era for DFIs was ushered in, one where they are expected to mobilise at scale much-needed private capital to help close the SDG financing gap, in addition to making transformative investment to pioneer and create new markets. DFI shareholders and stakeholders now expect their DFIs to achieve a broader and deeper range of development impact beyond job creation. At the same time, shareholders expect their DFIs to remain financially sustainable.

Seven years on, progress has been slow (Attridge and Gouett, 2021). Near- and medium-term prospects do not look good, with Covid-19 and climate change combining to reverse years of development progress and create extraordinary development challenges, which have been further exacerbated by the social and economic impacts of the war in Ukraine (Attridge, 2022). While it is true that there are external factors which affect DFIs' ability to excel in these areas, it is also true that DFI business models have been slow to adapt to these more ambitious 'asks' (Attridge and Gouett, 2021). This is of concern as we expect DFIs to come under further pressure to materially scale their investment and mobilisation just as aid budgets come under pressure, as well as stepping up their investment to ignite growth in the poorest countries.

Delivering on this ambitious agenda requires bold action and changes to DFI investment strategies, approaches and products, with consequent implications for DFI business models (Grimard and Novak, 2019). These must be better understood by DFI shareholders.

DFIs are diverse. They reflect the perspectives of their shareholder countries and their priorities. Consequently, DFI objectives, business models and funding differ, with varying implications for their ability to meet these new ambitious 'asks'. This study is a first attempt to help build a better understanding of the diverse range of current bilateral DFI business models and to offer some initial reflections on what these models may mean for the ability of DFIs to:

1 increase their level of high-risk investment considering the need to step up investment in the poorest countries and create and pioneer new markets; and

2 increase their investment volumes and mobilisation of private finance considering the growing SDG financing gap and the urgent need to support low- and middle-income countries (LMICs) to transition to low-carbon, climate-resilient growth paths.

The study does this through a comparative desk-based assessment of DFI financial statements and annual reports to highlight the intricacies of the business models of six bilateral DFIs (Table 1 List of studied DFIs). The study is a first dive into bilateral DFIs' business models as data is limited. Further study is required to understand their business models more fully. The study is intended to inform, encourage and facilitate discussion. It should not be interpreted as definitive.

Table 1 List of studied DFIs

Acronym	DFI name	Controlling country shareholder
BII	British International Investment	United Kingdom
DEG	Deutsche Investitions- und Entwicklungsgesellschaft	Germany
DFC	US International Development Finance Corporation	United States
FMO	Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V.	Netherlands
Norfund	Norfund	Norway
Proparco	Proparco	France

The working paper is structured as follows. Section 2 outlines the scope and methodology of the study, including a discussion on the data underpinning the analysis that follows. Section 3 presents a simple analytical framework for our analysis and presents an overview of the diverse nature of our studied DFIs. Section 4 provides a descriptive overview of the portfolio composition of the studied DFIs to set the context for the discussion in subsequent sections on DFI business models. Sections 5 to 8 looks at the various pillars of DFI business models: Section 5 explores risk, Section 6 explores the use of capital, Section 7 explores profitability and Section 8 explores governance. Given the urgent need to mobilise private finance, Section 9 explores DFI mobilisation. The working paper concludes in Section 10 by reflecting on the policy implications of the technical analysis in Sections 4–9, offering tentative observations and recommendations for shareholder consideration.

2 Scope, methodology and data

2.1 Scope

The study undertakes a dynamic assessment of six bilateral DFI business models (BII, DEG, DFC, FMO, Proparco and Norfund) over the period 2018 to 2020. These DFIs were chosen to capture the diverse nature of DFI business models, in terms of portfolio size, target geographies, instrument focus, ownership and funding model (see Section 3). We focus on bilateral DFIs as we believe that the political economy of change is less complex than for multilateral development banks (MDBs), and that several bilateral shareholders are receptive to new insights and ideas.

In addition to these six DFIs we include and analyse three 'insight' institutions. These have been included for reference, as we believe that they offer 'insight' on effective practices relevant to the study. These institutions are PIDG, TDB and BDMG.

2.2 Methodology

For each of the nine studied institutions we undertook a desk-based analysis of their annual reports and performed a financial analysis of their financial statements and investment portfolios for the period 2018 to 2020.This desk-based research was complemented with interviews with DFI strategy, financial and risk management staff. We were able to interview representatives from all DFIs and insight institutions except for DEG, which provided a written response to key questions.

2.3 Data and transparency

This study is presented as a working paper due to data limitations, which in certain areas constrain understanding and limit the inferences and comparisons we make.

The study's financial analysis uses data available in the published financial statements and annual reports of the studied institutions. Data gaps varied between DFIs and insight institutions. The studied

DFIs were asked to provide the missing data, and some kindly did so. Throughout the analysis that follows, we indicate data sources and any data limitations where relevant.

Common areas where key data was especially lacking or incomplete included:

1 sectoral, product and geographic breakdown of outstanding portfolios
2 composition of outstanding loan and guarantee portfolios by credit risk ratings and other information related to loan portfolio performance
3 breakdown of loan portfolios by senior and subordinated debt
4 results of equity investment portfolios
5 capital and liquidity ratios
6 mobilisation by sector, region and product. It was also noted that data on total mobilisation was not available for DEG and FMO.

Shareholders should encourage their DFIs to publish this data, which would help inform a more detailed understanding of DFI business models, especially in relation to the following two areas: (i) the level of risk in DFIs' portfolios and what headroom there is to take on more risk; and (ii) the effectiveness of their approaches to mobilisation.

3 DFI business models

3.1 **Analytical framework**

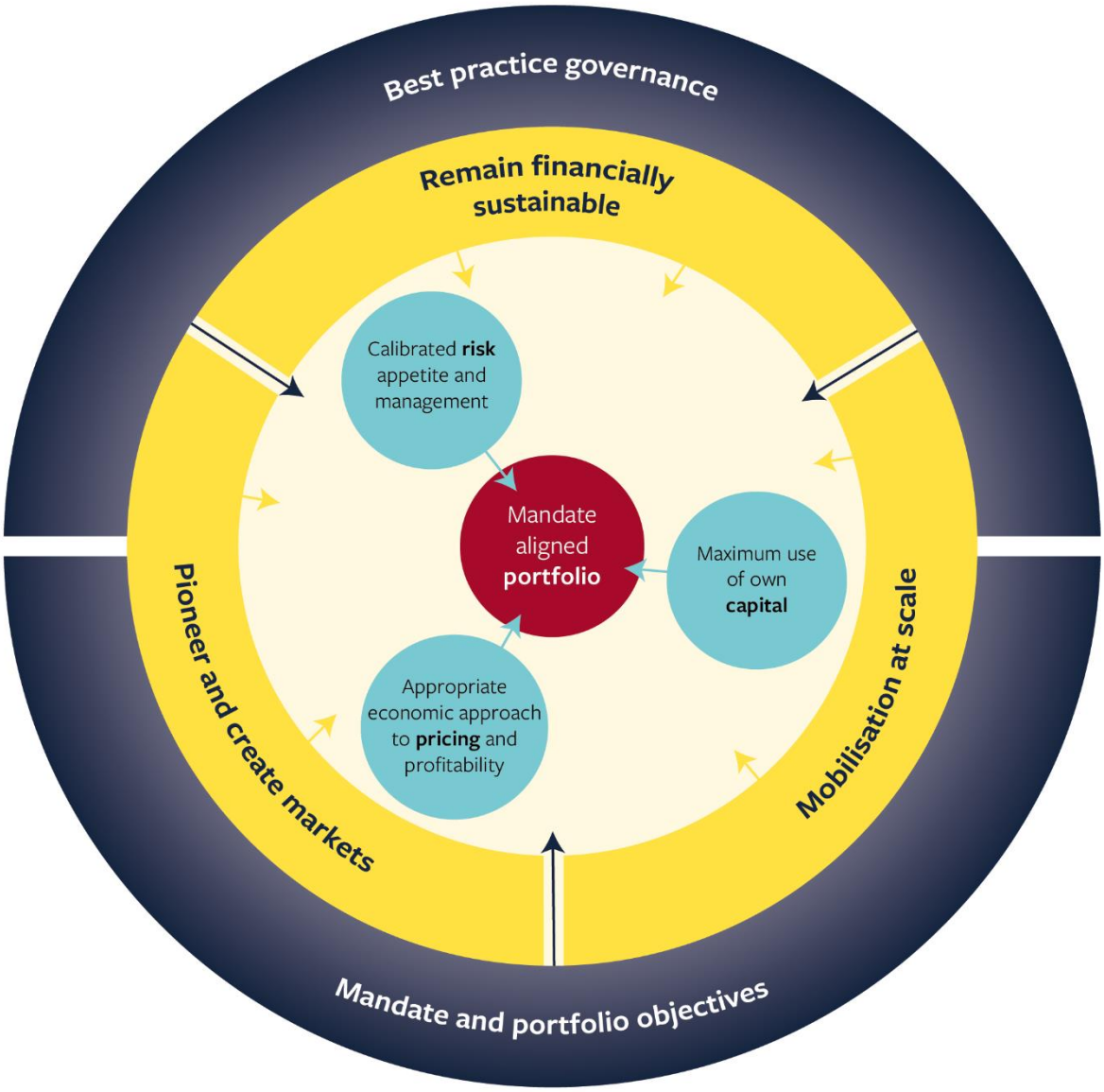
Figure 1 presents a simple analytical framework which underpins our understanding and analysis of the DFI business models presented in this working paper.

Driving factors. At the highest level, DFI operations are conditioned by their mandate. Shareholders may set geographic, sectoral, product composition and development impact targets to ensure that the portfolio evolves in line with a DFI's mandate and high-level shareholder objectives. The extent to which this is done varies (Table 3 in the next sub-section). In addition, the DFIs' governance practices, particularly to the extent that best practices are applied, are a determinant of their approach to taking risks, offering financial products that can result in high additionality, maximising capital utilisation, attaining a reasonable cost structure and profitability, and mobilising capital.

Why DFIs make investment decisions. DFIs undertake investment to achieve high-level shareholder objectives. As noted, DFIs are increasingly expected to mobilise large sums of private capital and make transformative investments to pioneer and create new markets. At the same time, they are expected to remain financially sustainable.

How DFIs make investment decisions. At the operational level, DFIs source investment opportunities to meet development impact and financial objectives in pursuit of their mandate and high-level goals. In doing so they have to assess and manage the impact–risk-return nexus of each investment and the investment portfolio more broadly, whilst maximising the use of their own capital. The outcome of this juggling act is a mandate-aligned portfolio allocation which meets the development impact and financial objectives set by shareholders.

Figure 1 DFI business models: a simple pictorial representation


Best practice governance
Remain financially sustainable
Calibrated risk appetite and management
Mandate aligned portfolio
Maximum use of own capital
Appropriate economic approach to pricing and profitability
Pioneer and create markets
Mobilisation at scale
Mandate and portfolio objectives
Driving factors
These factors are key to the operation of DFIs and play a fundamental role in business execution.
How DFIs make investment decisions
These are factors that DFIs use to source investment opportunities to meet their set financial and development impact objectives in pursuit of their mandate and high-level objectives.
Why DFIs make investment decisions
These factors drive why DFIs make investment decisions and help achieve high-level shareholder objectives.

Source: The authors.

Using this framework, we identify **five key pillars** of DFI business models and analyse these. We calculate key financial analysis metrics where relevant and possible, offering our observations and

reflections on each pillar and the interplay between them. These pillars are:

1 portfolio targets and outstanding portfolio composition

2 level of risk

3 use of capital

4 approach to profitability

5 governance practices.

These pillars are explored in the subsequent sections. Given the importance of the mobilisation at scale agenda, we offer some tentative observations on DFI mobilisation efforts. Regarding pioneering and creating markets, this is a complex issue to understand and assess, and it is outside the scope of this study.

3.2 DFI business models

Bilateral DFI business models are diverse. The ‘driving factors’ of the studied DFIs vary (Table 2). Their mandates, portfolio objectives and targets can be broad or narrowly defined. For DFC and Norfund, detailed geographic, sectoral and instrument allocation targets are set. For BII, DFC’s predecessor entity the Overseas Private Investment Corporation (OPIC) and Proparco, only geographical objectives are set. Meanwhile, DEG and FMO are allowed the most flexibility in their portfolio construction (Section 4).

Table 2 DFIs' mandate, portfolio objectives, targets or limits

DFI	Mandate	Geography	Sector	Product
BII (2017–2021)	Support business growth to lift people in Africa and South Asia out of poverty, and make a financial return.	• Only invest in Africa and South Asia. • Prioritise investment in poorest and fragile countries.	None specified	None specified
Norfund (2019–2022)	Mission is to contribute to the development of sustainable business and industry in developing countries by providing equity capital and other risk capital and by furnishing loans and guarantees.	• 100% in LMICs, and low-income countries (LICs). • At least 33% invested in least developed countries (LDCs). • At least 50% invested in sub-Saharan Africa.	At least 50% invested in renewable energy	At least 70% invested in equity
OPIC (2017–2019)	To mobilise private capital to help address critical development challenges around the world.	Preferential consideration for investment in LDCs.	None specified	None specified
DFC (2020–2025)	To mobilise investment in LICs, empower women and other underserved communities, while developing critical infrastructure to build peaceful and modern societies.	At least 60% invested in LICs, LMICs and in fragile states by 2025.	Over 2020–2025, to invest: • Technology and infrastructure ($5 billion). • Energy ($10 billion). • Health ($3 billion). • Food security and agriculture ($0.5 billion, 75% in LIC, LMICs and fragile states). • Water, sanitation and hygiene ($0.25 billion).	Maximum allocation of 35% to equity
FMO (2017–2020)	Mission to empower entrepreneurs to build a better world.	None specified	Focus in three sectors: financial institutions, energy and agribusiness, and food and water. • No specific sectoral targets set, but green finance targets set. • Annual green commitments; a minimum of: 32% in 2018 and 2019, and 34% in 2020. • New green portfolio target in 2020. 49% of total committed portfolio should be green as of 31 December 2020.	
DEG	To finance and advise private enterprises operating in developing and emerging-market countries.	None specified	None specified	None specified
Proparco (2017–2020)	Foster private investment in emerging and developing countries with the aim of supporting growth and sustainability.	• Invest €2.7 billion in Africa. • Invest €1 billion in LDCs and fragile states.	No specific sectoral targets set, but green finance target set at €2 billion in climate finance for the period 2017 to 2020.	Non specified

Our studied DFIs also vary in ownership structures, governance frameworks and funding (Table 3). These differences have varying implications for the DFIs, including risk appetite and the level of risk in their investment portfolios, use of leverage and approaches to mobilising private finance. These issues are explored in more detail in subsequent sections.

Table 3 DFIs' 'constructs'

DFI	Portfolio size	Main regional focus	Main instrument focus	Ownership	Funding source
BII	Medium	Africa and South Asia	Equity	100% UK government.	Periodic capitalisation from state.
DEG	Medium	Diversified	Debt	100% owned by KfW. KfW is 80% owned by German federal government; 20% owned by German federal states.	Equity and debt funded by parent (KfW), which issues bonds on capital markets.
DFC	Large	Diversified	Diversified	100% owned by US government.	Annual appropriation from state budget.
FMO	Medium	Diversified	Debt	51% owned by the Dutch state; 42% owned by Dutch commercial banks; 7% owned by employers associations, trade unions and other investors.	Equity from shareholders, and debt raised in the capital markets.
Norfund	Small	Africa and Asia	Equity	100% owned by Norwegian government.	Annual state budget allocation.
Proparco	Medium	Diversified	Debt	78.19% owned by Agence Française de Développement (AFD); 9.8% owned by French financial institutions; 10.03% owned by international financial institutions; 1.98% owned by other investors.	Equity from shareholders and debt funded by controlling entity (AFD), who issues bonds on capital markets.

4 Investment portfolios

4.1 Introduction

This section provides a descriptive overview of the composition of the studied DFIs' investment portfolios. The description in this section and the analysis that follows in subsequent sections are based on outstanding portfolio data (actual or estimated). We have used this data rather than investment approval data as it gives a more accurate picture of actual investment. However, in some cases this data was not available. In these instances, we have used investment commitment data as a proxy to provide the reader with a broad appreciation of the composition of these portfolios. We have indicated where this is the case.

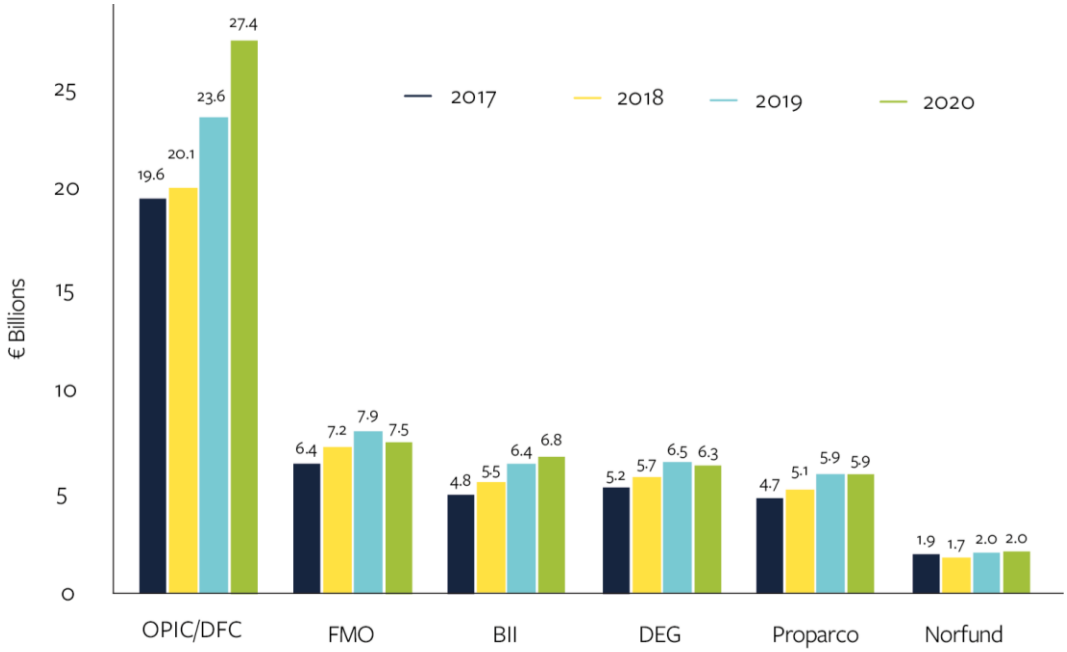
4.2 Portfolio size and growth

Except for DFC, bilateral DFIs' outstanding portfolios are smaller than multilateral DFIs (e.g., International Finance Corporation (IFC), Multilateral Investment Guarantee Agency (MIGA), European Bank for Reconstruction and Development (EBRD), European Investment Bank (EIB), Asian Development Bank (AsDB), Inter-American Development Bank (IDB)). The studied DFIs can be grouped into three by portfolio size: very large (DFC);[2] medium-sized (FMO, BII, DEG and Proparco); and small (Norfund) (Figure 2).

Whilst portfolios have all grown during the period 2017–2020, some have done so significantly (e.g., BII and Proparco) (Figure 3). We also see a mixed response in terms of responding to the Covid-19 crisis in 2020. DFC, BII and Norfund saw their portfolios increase in 2020. For FMO and DEG, their portfolios declined in 2020.

[2] When DFC was created in 2019 it consolidated the operations of OPIC, the legacy credit portfolio of the United States Agency for International Development's (USAID) Development Credit Authority (DCA), the enterprise funds of USAID's Office of Private Capital and Microenterprise. USAID's sovereign loan guarantees were also transferred.

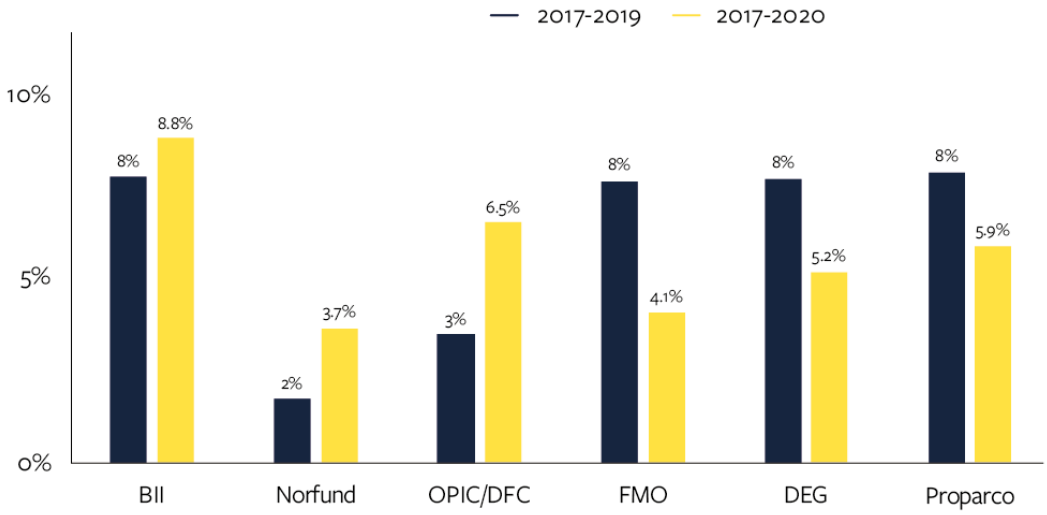
Figure 2 Gross outstanding portfolio as of 31 December 2020[3]



Source: Authors' calculations based on DFI annual reports.

Note: Where applicable, amounts in non-euro reporting currencies were converted to Euro-equivalents using the corresponding financial year-end exchange rates.

Figure 3 Outstanding portfolio compound annual growth rate, 2017–2020



Source: Authors' calculations based on DFI annual reports.

[3] For OPIC/DFC the gross outstanding portfolio is as of 30 September of each year in line with the financial year.

Our insight institutions have relatively small portfolios. At the end of 2020, TDB's non-sovereign portfolio[4] totalled approximately €2.2 billion. PIDG's portfolio was €1.8 billion, comparable in size to Norfund. BDMG had a much smaller portfolio of €1.0 billion at the end of 2020.

4.3 Geography

In terms of the geographic allocation of the portfolios, DFIs fall into two groups: those that are diversified across all regions (DEG, DFC, FMO and Proparco) and those that mostly target specific regions or groups of countries (BII and Norfund).

BII and Norfund focus on more challenging markets, notably Africa, compared to the other DFIs (Table 4). Since 2012, BII has only been allowed by its shareholder to invest in South Asia and Africa, although this will change going forward.[5] Norfund has two geographic targets set by its shareholder: a target to invest at least 33% of its portfolio in LDCs, and at least 51% of its portfolio in sub-Saharan Africa, with 39% and 52% invested in these areas respectively at the end of 2020. BII, Norfund and DFC (to a more limited extent) have been increasing their portfolio allocation to Africa during the period 2018–2020. Allocations to Africa for DEG, FMO and Proparco remained the same over the review period.

While the studied DFIs target some of the more difficult investment geographies, there is significant country concentration in some of the easier/more mature markets within these. Five countries accounted for 50% of BII's outstanding portfolio at the end of 2020, with significant concentration in India (26%). Norfund's portfolio was even more concentrated, with five countries accounting for 72% of the portfolio, including significant concentration in the Philippines (32%).

In contrast, Proparco, FMO, DEG and DFC[6] are more diversified across regions. DFC's portfolio appears to be less concentrated as the top five destination countries accounted for 24% of its portfolio at the end of 2020. Country data was not available for DEG, FMO and Proparco.

[4] We use TDB's non-sovereign portfolio as this is the part of the portfolio that is focused on private sector operations, which are similar to the operations of our studied DFIs.

[5] In its new five-year strategy (2022–2026), BII's investment geography has expanded to include climate-related investment in the Indo-Pacific, with a focus on the Philippines, Indonesia and the Mekong region. The strategy also enables BII to invest in the Caribbean (BII, 2022).

[6] DFC's geographical analysis is based on exposure data as of 31 December 2021 as a proxy, as data is not available for prior periods.

Table 4 Regional portfolio allocation as of 31 December 2020

	Africa	Asia	Latin America and the Caribbean	Europe	Global, rest of world, unknown
BII	60%	30% South Asia 3% Other Asia			7%
DEG	30% SSA and Middle East and North Africa	30%	30%	5%	5%
DFC	27% SSA 10% Middle East and North Africa	18% Asia 11% Eastern Europe and Central Asia	28%		6%
FMO	28%	23% Asia 18% Eastern Europe and Central Asia	19%		12%
Norfund	60%	28%	12%		
Proparco	28% Africa 14% Middle East and North Africa	11%	22%		24%

Source: Authors' calculations based on DFI annual reports.

In terms of our insight institutions, TDB is a regional DFI focused on eastern and southern Africa. It lends to both the public and private sectors,[7] and its portfolio is well diversified across these regions. It is also noteworthy that, at the end of 2019,[8] there was significant investment in African LICs. At the end of 2019, investment in Sudan, Malawi and Ethiopia accounted for 12%, 11% and 11% respectively. In the case of PIDG, 44% of its cumulative commitments over the period 2002 to 2020[9] were made in LICs. BDMG is a state-owned bank in Brazil focused on investment in Minas Gerais.[10]

[7] TDB's non-sovereign portfolio accounted for 39% of its total outstanding portfolio as of 31 December 2020.

[8] We use 31 December 2019 data as a country breakdown as of 31 December 2020 is not published in TDB's 2020 Annual Report.

[9] Detailed portfolio data is not available from annual reports.

[10] Brazil is an upper middle-income country, and the State of Minas Gerais is the third richest in Brazil. See https://www.statista.com/statistics/1337639/gdp-brazil-by-state/

4.4 **Sector**

Investment in financial institutions (FIs) is substantial for many of the DFIs studied. Investment allocation to FIs[11] represents the largest sectoral allocation for four DFIs, and the second-largest for the remaining two. The average of their allocations to FIs was approximately 40% at the end of 2020, ranging from 36% (Norfund) to 52% (BII).

Allocations to corporates and infrastructure follow in importance, but their importance varies across the DFIs. Allocation to infrastructure is notably high for Norfund, which had 47% of its outstanding portfolio invested in clean energy at the end of 2020.

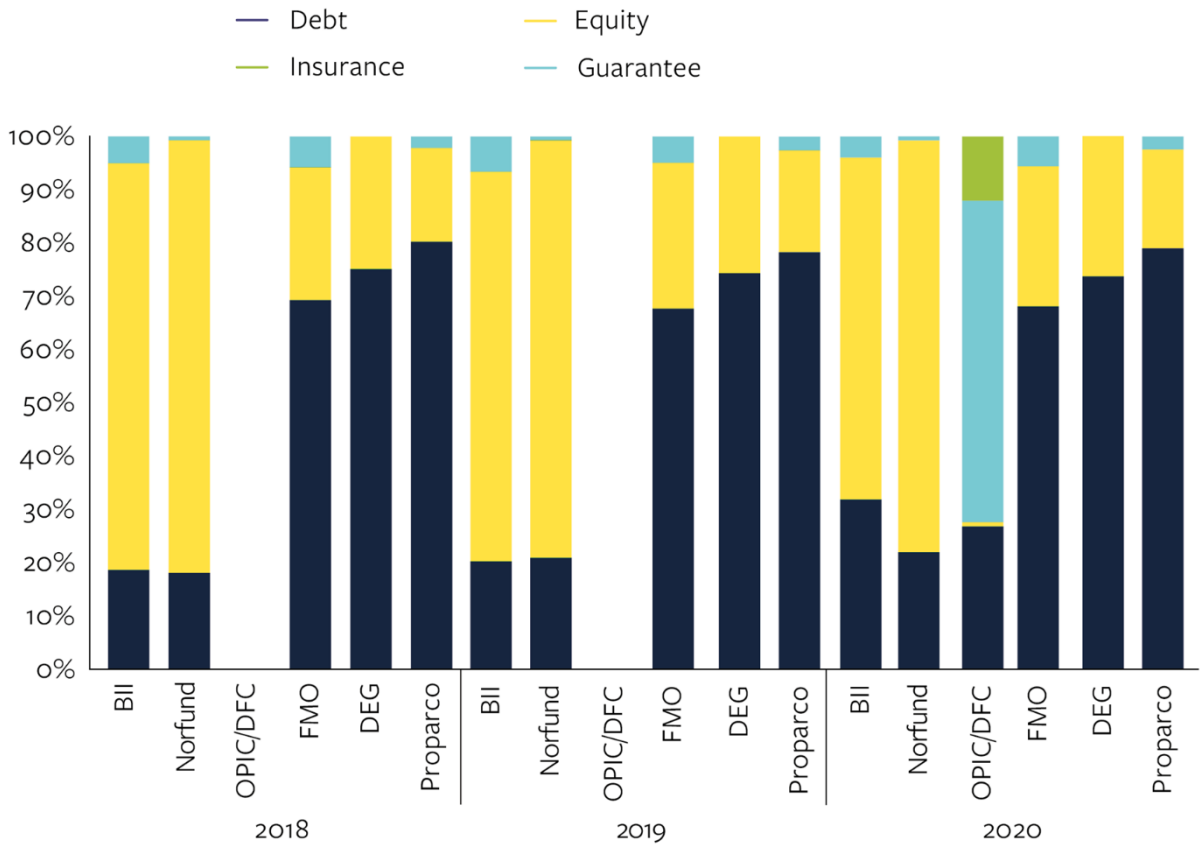
Interestingly, when we look at our insight institutions, we observe a much smaller portfolio concentration in FIs. BDMG does not invest in this sector. PIDG does not invest significantly in FIs and TDB had a small allocation of 14% at the end of 2020. As an innovative infrastructure project developer and investor, PIDG stands out for its infrastructure focus. BDMG is diversified across sectors, but in contrast to the studied DFIs its largest concentration has been in the manufacturing sector, which accounted for 30% of its outstanding portfolio at the end of 2020. It also has a much larger exposure than the studied DFIs to the agriculture and agro-industrial sector, accounting for 18% of its outstanding portfolio at the end of 2020. TDB also has a larger exposure to agribusiness, constituting 19% of its outstanding portfolio at the end of 2020.

4.5 **Products**

In terms of product composition, the portfolios of the studied DFIs can be grouped into three categories: debt finance (DEG, FMO and Proparco); equity investment (direct and intermediated) (BII and Norfund); and a broader range of products with greater flexibility (DFC).

[11] Sectoral investment allocation to FIs is mostly investments in FIs that locally on-lend to local end-borrowers in a range of sectors. In the case of some DFIs, investments in funds are included in this sectoral allocation.

Figure 4 Product mix, 2018–2020



Source: Authors' calculations based on DFI annual reports, except for DFC.

Notes: For DFC, data for 2020 was provided directly by DFC. DEG trust funds are on balance sheet but not allocated by instrument. Proparco's external funds are on balance sheet and allocated by instrument. For DEG we have excluded trust funds from the calculation of portfolio composition, as we do not know their instrument composition and they represented less than 3% of gross portfolio outstanding during the review period.

At the end of 2020, debt finance accounted for 79%, 71% and 68% of Proparco's, DEG's and FMO's outstanding portfolio, respectively (Figure 4). Unfortunately, data on the type of debt is not generally available. Where data is available, it confirms that most of the debt investment is senior debt rather than subordinated or mezzanine debt.[12] For example, 69% of Norfund's debt portfolio was composed of senior debt at year-end 2020.

The use of equity is limited, despite being a highly developmental product. BII and Norfund stand out in terms of their use of equity investment compared to the other studied DFIs. Equity accounted for 64% and 77% of BII and Norfund's outstanding portfolio, respectively, at the end of 2020. Norfund is notable as it states a preference for

[12] Subordinated debt is debt that ranks below senior debt and has a lower repayment priority than senior debt. Mezzanine finance is a hybrid of debt and equity finance.

equity investment, as this is the scarcest form of capital, and is seeking to increase its allocation to intermediated equity as an efficient way to provide risk capital. BII has been reducing its allocation to equity (especially intermediated equity) in favour of debt. In contrast to OPIC, DFC has new equity authority. Although it did not make any equity investment in the financial year ended 30 September 2020, deals were in the pipeline and booked in the financial year ended 30 September 2021. However, at the time of writing, DFC's future use of equity is severely constrained due to current US Federal budget scoring, which treats an equity investment like a grant, requiring dollar-for-dollar budget appropriation. It is hoped that a proposed change in budget scoring to treat equity similarly to debt will significantly expand its use by DFC.[13]

Except for DFC, there is very little use of guarantees and credit insurance (Figure 4). These are effective products that shift the risk-return profile of an investment. We estimate that guarantees at the end of 2020 accounted for 15% of DFC's outstanding portfolio. DFC can also issue political risk insurance for a total coverage of up to $1 billion. We estimate that credit insurance and reinsurance accounted for 16% of DFC's outstanding portfolio.[14] Guarantees accounted for 4% of BII's outstanding portfolio at the end of 2020. According to DEG, guarantees and political risk insurance are only partly deployed.[15]

The use of grants for technical assistance and project development is very limited for the studied DFIs. Volumes are small and mainly funded by external grant finance rather than DFIs' own account resources. For BII, DEG and Norfund, it has been funded separately by their shareholder governments. BII has been allocated grant financing to fund technical assistance for 2022 and 2023, but after that it will be expected to fund this from external grant finance, as its business model does not allow technical assistance to be self-financed. DFC has a new technical assistance authority which is self-financed. For DEG, it is funded by a mix of own-account resources and external resources.

In terms of insight institutions, TDB and BDMG mostly deploy debt finance, constituting 93% and 99% respectively of their outstanding

[13] A new Bill known as The America COMPETES Act 2022 seeks to change this accounting treatment and proposes that equity is treated the same way as debt investment under the Federal Credit Reform Act of 1990 using a net present value. See https://www.devex.com/news/new-bill-would-boost-us-dfc-s-spending-ability-102537

[14] Based on an outstanding portfolio as of 31 December 2021 adjusted for 2021 equity investment, as proxy data for year-end 2020 and prior years is not available. See https://www.dfc.gov/who-we-are/transparency-and-accountability

[15] We have not been able to estimate the portfolio allocation for these instruments as data is not available in the financial statements or on the website.

portfolios at the end of 2020. TDB's main business is short-term trade finance (58% of gross loan portfolio) and long-term project and infrastructure finance.

PIDG is very different from the other institutions covered in this study and fills an important gap in development finance for infrastructure projects. Addressing the lack of bankable projects, PIDG offers technical assistance support (PIDG TA and DevCo), providing 'viability gap funding' (VGF) and transaction advisory support funded by grants. It also supports the piloting of new programmatic initiatives. Its four other group entities (Emerging Africa Infrastructure Fund (EAIF), GuarantCo, InfraCo Asia and InfraCo Africa) are entirely focused on providing risk capital for infrastructure development. GuarantCo focuses on deploying guarantees, 75% to 80% of which are in local currency. InfraCo focuses on the origination and development of infrastructure, providing early-stage high-risk capital. EAIF provides long-term hard and local currency loans. At the group level (the level at which data is available), guarantees, debt and equity accounted for 52%, 44% and 4% respectively of its outstanding portfolio at the end of 2020.

4.6 **Reflections**

4.6.1 Instrument mix

Except for DFC, there is very little use of guarantees and high-risk debt financing (subordinated and mezzanine financing). The low use of guarantees is mainly to do with a lack of incentives. Their ticket size is often smaller than debt, they don't expand the balance sheet and they use the same amount of capital as debt. This affects the effectiveness of DFI business models as it limits their financial additionality and development impact, especially in some of the more difficult and frontier markets. The limited use of subordinated and mezzanine financing, and of tailored financing overall, is also due to the lack of incentives. These products require a higher level of human effort, in addition to specific structuring expertise. Finally, while the use of equity is relevant in the cases of BII and Norfund, the rest of the studied DFIs use this instrument to a much lower degree. Several factors contribute to its limited use compared to debt and include a more intensive use of financial and human capital and greater volatility in return.

This limited use of high-risk capital is likely to constrain the ability of DFIs to step up their investment in the poorest countries and create and pioneer new markets in them. It also most likely limits the ability of DFIs to structure and develop products that can mobilise commercial investors at a larger scale in more developed markets.

4.6.2 Sectoral allocation

There is significant concentration in FIs. This study has not analysed data at the investment level in terms of sub-financial sectors and specific projects being financed, but we note potential issues about the financial and development additionality of investment in this sector *vis-à-vis* investing directly in clearly developmental projects. Indeed, a 2020 evaluation of FMO states:

> *while financial additionality can be significant for Financial Institution (FI) investments, it is less obvious than other sectors and needs to be further justified and demonstrated* (Spratt et al., 2020).

Similarly, a recent evaluation of BII's investment portfolio in FIs finds:

> *Loans and advances of the overall portfolio have grown, although it is not clear if these loans are reaching the targeted segments (e.g., small and medium enterprises (SMEs), households, women, etc.) (Sunderji et al., 2020).*

This evaluation also questions the FI sub-sector and geographic allocation and suggests that there is scope to increase the development impact of BII's FI portfolio by refocusing investment in different types of FIs and sub-sectors and harder-to-invest geographies (including harder-to-invest Indian states) (ibid.).

Many of the studied DFIs have made commitments to accelerate their green investment and align their portfolios to the Paris Agreement. DFI investment has traditionally focused on low-hanging fruit, such as mitigation through investment in established renewable energy technologies. As technologies such as solar and wind develop and become more cost-competitive, allocation of DFI investment will need to shift to new frontier technologies. More investment will be needed in energy storage, energy efficiency, mass transit, waste management, recycling, etc. Innovation to develop low-carbon technologies and products will require DFIs to deploy more 'venture-like' high-risk capital.

5 Risk level

5.1 **Introduction**

The study has assessed the level of risk taken by the six DFIs as a relevant factor conditioning the developmental effectiveness of their operating models.

Broadly speaking, investments that have potential for high additionality tend to be riskier than those with less additionality.[16] Projects in LICs are naturally riskier overall than in other developing countries, and the same applies, for example, in sectors with confirmed high business risks (e.g., the agricultural sector in general, namely when financing smallholder farmers), projects in the early development stage, infrastructure projects with off-takers that have weak creditworthiness and when utilising financial instruments with inherent high risks (e.g., equity investment, subordinated debt). These and other similar circumstances with higher risk offer clear higher additionality.

Under this general assumption, the study has examined the following angles:

Investees' risks. The specific risks of investees represent a key determinant of the level of risk of portfolios. However, such information is only exceptionally and partially disclosed, and in these cases the next two angles are particularly considered.

Financial products' risk. By their nature, equity investments entail higher risks than loans and guarantees. Equity investments have the capacity to mobilise additional debt funding by taking a higher risk within the capital structure. Mezzanine financing stands in between equity and senior debt financing in terms of risk and typically in terms of additionality.

[16] Additionality is generally understood to mean 'that an intervention will lead, or has led, to effects which would not have occurred without the intervention' (Andersen et al., 2021). There are two main types of additionality commonly associated with DFI investment. Financial additionality refers to situations where DFI investment results in the mobilisation of private finance and investment that would not have materialised otherwise. Development additionality refers to situations where DFI investment results in development impacts that would not have occurred otherwise (ibid.).

Geographic and sector risks. While country and sector risks are embedded in the corresponding investees' risks, the study has considered regional, country and sector allocations, particularly when information about investees' risk level is not available or is limited. Some sectors present higher risks, and potential for higher additionality, than others.

Applicable regulations, self-imposed financial parameters and risk management practices. As elaborated in sub-section 5.4, the study observes that the existence of applicable regulations, self-imposed financial parameters (namely resulting from imposing a specific credit risk rating level), and the approach to risk management may have an influence on the level of risk taken.

5.2 Investees' risks

Assessment of the level of risk taken by the DFIs in consideration of the specific risks of investees has been approximated based on the following criteria:

Regarding loan and guarantee portfolios. When information about the composition of the loan and guarantee portfolios by credit risk ratings was made available, an estimated weighted average credit risk rating was calculated.[17] Complementing such information, or where it was absent, the level of expected credit losses and/or of non-performing loans is considered.

Regarding equity portfolios. Since an assessment of the specific risks of the equity investments is not feasible, the next criterion (i.e., geographic and sector allocations) has been considered for reflecting on the overall level of risk. Prudent consideration has also been given to the financial results of the corresponding equity portfolios, under a general assumption that some losses may indicate a high risk level.

Geographic and sector allocation. The study considers regional, country and sector allocations, under the general understanding that the degree and specifics of these allocations overall result in different levels of risk. While these considerations are addressed in this sub-section, they are further assessed in sub-section 5.3.

Considering FMO's outstanding loan and guarantee portfolios by credit risk rating, the estimated weighted average credit risk rating of each of these portfolios is B as of year-end 2020, and they range between B+ and BB- as of the end of 2018 and 2019. This suggests that FMO's normalised level of risk might not be high enough to result in the level of additionality that would be expected from a DFI, considering that B- is the estimated weighted average rating of

[17] The weights are based on Standard & Poor's (2021) Global Corporate Average Cumulative Default Rates by Rating Modifier (1981–2020), five years' time horizon.

LMICs that are rated, and based on the convention that private sector borrowers in such countries are mostly rated equally to the sovereign or up to three notches below it. We also note FMO's use of loans and guarantees, which constitute 73% of the overall portfolio at the end of 2020 and represent instruments with lower risk than equity. As discussed further in sub-section 5.5, FMO makes higher-risk investments using separate state-funded vehicles. However, information on the precise level of risk of these portfolios is not available, and they aggregate only about 15% of the portfolio granted from FMO's own capital.[18]

Regarding BII, the study estimates the weighted average credit risk rating of its outstanding loan portfolio at B+ as of the end of 2019 and 2020, posting the lowest balance of expected credit losses as a proportion of the outstanding loan portfolio among the studied DFIs, equal to 0.3% at the end of 2020 according to our calculations. Therefore, we have the same observations as those presented above in relation to the weighted average credit risk rating of FMO's loan and guarantee portfolio. However, BII may be deliberately choosing a prudent risk level for its loan and guarantee portfolio given that 64% of its portfolio takes high instrument risk through equity investments. The high level of unrealised losses of the equity portfolio in 2019 and 2020 may at first lead one to conclude a high level of risk of this portfolio, but we caution against such an assumption in sub-section 5.3.

Proparco presented a 4.5% loan loss provision balance as of year-end 2020 (3.4% of gross loan portfolio in 2019). Of note, loan loss provisions highly depend on the credit risk rating of individual borrowers. Although a detailed assessment of Proparco investees' risks has not been possible, its level of loan loss provision (expected credit losses) could indicate a portfolio with a level of risk that is not high enough to result in maximum additionality. It happens that Proparco's expected credit losses are lower than FMO's (5.3% and 5.5% in 2019 and 2020, respectively), and we refer to our above observations regarding the low weighted average credit risk ratings of FMO's loan and guarantee portfolios when compared to the weighted average credit risk rating of the LMICs. We have also identified a particularly prudent approach by Proparco to risk-taking, since despite the apparently low level of risk of its loan portfolio, approximately 32% of its gross loan portfolio was guaranteed by Agence Française de Développement (AFD) (Proparco's majority shareholder) at the end of 2020. Note also the further considerations in sub-section 5.3 regarding Proparco's relatively low degree of the

[18] As mentioned in sub-section 9.4, additional investments are also managed separately by FMO's investment management subsidiary, which the study assumes to have a level of risk similar to that of FMO's portfolio granted from its own capital.

use of equity investments and high allocation to FIs (normally a relatively low-risk sector). However, we recognise that Proparco's level of risk increased during the period under study, reflected in increased loan loss provision balance and growth of its equity portfolio both nominally (43% increase from December 2017 to December 2020) and proportionally in relation to the total portfolio (from 16% as of year-end 2017 to 19% as of year-end 2020).

The level of risk of DFC's investees cannot be granularly measured based on the information available. Of note, DFC's financial statements apply Government Auditing Standards, which present challenges to such assessment. However, based on our interpretation of the 'subsidy rates'[19] that DFC applies (e.g., 10.25% on direct loans and 8.59% on loan guarantees), the level of risk taken may be high, hence possibly resulting in relevant additionality. Furthermore, ongoing organisational adjustments due to the Better Utilization of Investments Leading to Development (BUILD) Act could result in DFC taking increased risks. The BUILD Act makes DFC's development mandate more explicit, and a decision was made to remove the requirement to be financially self-sustaining (although the intention is not to seek losses, and it will continue to operate under budgetary limits).

It has also not been possible to assess DEG's and Norfund's risk levels of their specific investees. However, the level of DEG's loan loss provision balance is the highest among the studied DFIs (9.3% and 9.5% of gross loan portfolio as of year-end 2019 and 2020, respectively), indicating a high level of investee risks. This assumption is supported by the risk level of DEG's equity portfolio (26% of overall outstanding portfolio at the end of 2020), which the study considers high considering the portfolio's unrealised losses. Norfund's investees also appear overall to exhibit a high level of risk. Its loan portfolio (22% of total outstanding portfolio) presented a high level of non-performing loans as of year-end 2020, equal to 8.7% of the gross loan amount. The next sub-section supports the observation regarding Norfund's high risk-taking, based on the use of equity investments and a regional allocation with weight given to LDCs. We highlight that Norfund's constitutional document, the Norfund Act, mentions in its first paragraph that the institution will

[19] Subsidy cost is the estimated long-term cost to the US Government of direct loans or loan guarantees calculated on a net present value basis, excluding administrative costs. Net present value is calculated on the expected cashflows of the loan/guarantee – which contemplate potential losses – and applying a discount rate. The subsidy rate results from dividing the subsidy cost by the nominal loan/guarantee amount. Under our understanding that DFC does not normally grant loans/guarantees on relevant concessional economic terms, the relatively high subsidy rates may indicate a high risk appetite.

establish undertakings that would not otherwise be initiated because of the high risk involved.

In comparison to the six studied DFIs, BDMG and PIDG take high risks when considering the specific risks of their investees. These two institutions focus on sectors ('real economy' and infrastructure, respectively) and regions (State of Minas Gerais and a relevant allocation to LICs, respectively) where a high level of risk is inherent overall.

BDMG's estimated weighted average credit risk rating of its outstanding loan portfolio is B-, considering the two-notches rating downward adjustment made by Standard & Poor's (S&P) to the 'anchor' credit rating of bb+ due to the 'risk position' factor. This is supported by our assumption that BDMG's loan portfolio, largely composed of SME borrowers, must have at least a one-notch differential with Brazil's short-term rating of B. While BDMG's portfolio is mostly collateralised, the institution essentially relies on borrowers' capacity to repay given the legal and operational challenges surrounding the execution of collateral in Brazil.

PIDG's entities take high-risk positions in infrastructure projects given the group's focus. EAIF's total loan loss provision has been high (10.5% and 8.3% of gross loan portfolio as of year-end 2019 and 2020, respectively, i.e., on average about the same level as DEG's). The estimated weighted average credit risk rating of GuarantCo's portfolio is between B and B- (based on available portfolio data by credit risk rating), and InfraCo Asia and InfraCo Africa are mandated to take very high investee risk level (evidenced by their historical net losses).

TDB's business focus does not normally require taking overly high investee risks given that (i) trade finance, with a maximum tenor of three years, and which by nature overall implies limited risks, comprises approximately 58% of the outstanding portfolio; and (ii) an estimated 61% of its portfolio is allocated to sovereign-related projects, noting that TDB is a multilateral treaty-based institution that benefits from 'preferred creditor treatment'. However, TDB finances the region with the largest number of LMICs. Furthermore, TDB plays an important role in helping to address the region's finance gap, which is proportionally the highest among developing regions, including in relation to trade finance.

5.3 Financial products, and geographic and sector considerations

This sub-section presents specific risk considerations in relation to the financial products used by the six DFIs, and their geographic and sector allocations.

The portfolios of Norfund and BII comprise a high proportion of equity investments, equal to 77% and 64% of their corresponding overall outstanding portfolios at the end of 2020 (sub-section 4.5). Equity is by nature the riskiest tranche in the capital structure of an organisation or project, and it is a financial instrument that has the capacity to result in high financial additionality.[20] Based on these considerations, Norfund and BII may at first be assumed to take a level of risk that could result in high additionality.

The effort and mindset of Norfund and BII to invest in equity and have such weighting in their overall portfolios is unique in the DFI world. In the case of Norfund, its high equity allocation is complemented by an overall 39% allocation to LDCs[21] in Africa and Asia and a 47% allocation to energy. Each of these allocations are the highest among the DFIs assessed and are deemed to most probably result in high additionality.

In the case of BII, the study notes that its overall portfolio has a high concentration in (i) FIs, equal to 52% of its outstanding portfolio as of year-end 2020; and (ii) India, equal to 26% of its outstanding portfolio as of the same date (with a policy country limit set at 38%). These sector and country concentrations are among the highest of the studied DFIs, and may indicate that, despite BII's high utilisation of the equity instrument, the level of risk of such a portfolio may overall not be as high as it could be. We assess India and the financial sector as generally presenting lower risks than other countries and sectors, although we recognise that there may be individual investments within the portfolio which may have a higher level of risk than may usually be associated with India and the financial sector. Further, as mentioned in sub-section 4.6.2, a recent evaluation of BII's FI investment portfolio questions the geographical and FI sub-sector allocation of this portfolio (Sunderji et al., 2020). In addition, we note that most of the equity investments in India are in listed securities. In the absence of granular data, these observations may indicate that, despite BII's high utilisation of equity, the level of risk may not be as high as it could be.

FMO, DEG and Proparco present a significantly lower degree of utilisation of equity instruments as a percentage of their corresponding outstanding portfolios: 27% for FMO, 26% for DEG

[20] Equity sits at the bottom of the capital structure. It is high-risk capital, as the financial returns are not predefined and are paid out of net profit so the return on equity is more volatile than the return on debt. Equity is a prized product as it has high development and financial additionality, due to its relative scarcity in many LMICs and its ability to enable leveraging of company or project balance sheets.

[21] The Norfund Act establishes that lower middle-income countries and countries having a lower income per inhabitant than these countries will qualify as recipients of funding from Norfund.

and 19% for Proparco, as of year-end 2020. Moreover, these three DFIs have a relatively strong focus on FIs, representing by far the highest sector allocations in the case of FMO (37% as of year-end 2020) and Proparco (38%). As discussed in sub-section 4.6.2, we consider that a focus on FIs overall entails relatively low risks and additionality that is 'less obvious than other sectors and needs to be further justified and demonstrated' (Spratt et al., 2020: vi). Regarding DEG, while we estimate that FIs constitute the largest sectoral allocation in its portfolio, equal to approximately 35% of its outstanding portfolio (estimate based on DEG's committed volumes during the last three years), its portfolio of direct investments in corporates is estimated at a high level of 30%. This, combined with the overall high level of investees' risks per the assumption in sub-section 5.2 (in relation to both its loan and equity portfolios), may lead to the conclusion that DEG's portfolio risk level is positioned to offer reasonable additionality.

While DFC did not have any outstanding equity investments as of 30 September 2020, some are expected to be completed during the 2021 fiscal year. However, growth of the equity portfolio within the 35% maximum allocation established by the BUILD Act may be slow under the current US Federal budget scoring approach, as further detailed in sub-section 4.5. In any case, DFC's sizable guarantees and credit insurance/reinsurance portfolio (approximately 72% of its outstanding portfolio at the end of 2020), the largest allocation to these kinds of products among the studied DFIs, have for many years been covering risks of funding for micro-, small- and medium-sized enterprises, and investment fund portfolios, infrastructure and other projects, taking high risks with a focus on achieving additionality, development and mobilisation of private sector capital.

Regarding our insight institutions, while BDMG, TDB and PIDG deploy minimum equity investments (1%, 2% and 3% of their respective outstanding portfolios at year-end 2020), they overall take high geographic and sectoral risks. BDMG takes high geographic concentration risk by operating in a single state in Brazil, and it directly supports companies active in a wide variety of sectors. TDB operates solely in eastern and southern Africa, and TDB presents the highest country concentration risk among the studied institutions (investments in the top five countries – three LMICs and two LICs – aggregate 66% of the total portfolio at year-end 2019).[22] TDB and BDMG have the highest allocation to the agriculture and agro-industrial sector among the studied institutions, with a 19% and 18% allocation as of year-end 2020, respectively. We note that the agriculture and agro-industrial sector overall presents high risks, and

[22] Year-end 2019 data is used as a country breakdown is not published in TDB's 2020 Annual Report.

experiences particularly high unmet financial needs despite being a key driver of employment and economies.

In relation to PIDG, all of its entities take high risks in infrastructure financing, providing 'viability gap funding' (VGF) through PIDG TA, as mentioned earlier. Investment instruments used by PIDG entities include high-risk loans, equity investments and guarantees. Furthermore, over 75% of GuarantCo's guarantee portfolio takes developing countries' currency risks,[23] and EAIF's product offering includes long-term local currency loans. The studied DFIs offer limited local currency products, despite these being of high additionality. Moreover, the group presents an important allocation to LICs (44% of 2002–2020 cumulative commitments).

5.4 Applicable regulations, self-imposed parameters and risk management practices

The analysis indicates that a regulatory environment, self-imposed financial parameters and the approach to risk management are all factors that may have an influence on the level of risk taken by the studied DFIs.

FMO is the most regulated among the studied DFIs. Fully licensed as a bank in the Netherlands, it is supervised by the Dutch Central Bank and the European Central Bank (ECB). In addition, FMO raises financing in international debt capital markets under a self-imposed AAA credit rating for its senior unsecured debt issuances. AAA is the highest possible credit rating, which means that FMO is (self-) required to mainly align levels of risk taken, capitalisation and liquidity towards ensuring an almost-zero risk of default on its financial obligations. Moreover, FMO's risk management practice might be leading to an approach which exceeds the requirements to achieve a AAA rating, including in relation to the levels of risk taken, financial leverage[24] and liquidity. In any case, we question if a AAA rating is best suited to maximise the use of FMO's capital. The most effective use of capital in consideration of various factors, including FMO's mission and cost of funding at different rating levels, could well be at a rating level below AAA, which would allow FMO to increase its level of risk (as well as the amount of its debt funding, and hence its investment volume). Therefore, the combination of factors highlighted here might contribute to previous observations about FMO's level of risk, which might not be high enough to achieve maximum additionality and may possibly present the lowest risk level among the studied DFIs.

[23] GuarantCo offers guarantees which cover investment denominated in local currency.

[24] In this paper, the level of financial leverage means the degree of the use of debt funding (borrowed capital) in comparison to the use of equity funding.

Proparco and AFD are not banks but *Sociétés de Financement*. They are supervised by the Autorité de Contrôle Prudentiel et de Résolution, France's supervisory body for the banking and insurance sectors. Proparco and AFD are less regulated than FMO, and they are not supervised by the ECB. Both self-impose to target the highest possible credit rating, currently capped at France's AA rating, which requires levels of risk taken, capitalisation and liquidity that are similar to those of a AAA-rated institution. Similarly to the case of FMO, these factors and the overall approach to risk management might be preventing Proparco from taking a higher risk level.

DFC and Norfund are not subject to FI regulations, and Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin), Germany's federal financial supervisory authority, has exempted DEG from significant regulations under the German Banking Act. In addition, DFC and Norfund, are not rated since they do not issue debt in capital markets.[25] Moreover, the study observes that the risk management practices of these DFIs (including in relation to governance) overall differ from those normally applied by commercial banks. This is particularly the case for Norfund and DFC, allowing them more flexibility. Interestingly, and as implied in the previous sub-sections, these three institutions are assumed to take a higher level of risk than the other DFIs studied.

In comparison, BDMG, TDB and GuarantCo[26] are rated, and BDMG is in addition regulated by the Central Bank of Brazil. However, the credit ratings targeted by these institutions are reasonable in consideration of: (i) the level of risk that is required to be highly developmental; (ii) the effective use of capital; and (iii) what is acceptable to the guarantee beneficiaries in the case of GuarantCo. BDMG is rated B/B2[27] (which is, for example, 14 notches[28] below FMO's AAA rating), TDB is rated BB+/Baa3, and GuarantCo is rated AA-/A1. As an additional important highlight, the risk management approaches of these three institutions are aligned with best practice in mainstream financial markets.

5.5 Management of external funds to undertake higher-risk investment

Some of the studied DFIs manage external funds that are separate from their business in order to undertake higher-risk investment. As

[25] In the case of DEG, KfW is rated AAA. However, DEG's assets and equity represent approximately 1% of KfW's consolidated assets and equity, and hence the implication of KfW's AAA rating to DEG's might be insignificant.

[26] GuarantCo is the only PIDG entity that is currently rated.

[27] Local currency ratings.

[28] One notch represents one level of difference between two credit ratings. For example, there is one notch difference between BBB and BBB-.

mentioned, FMO manages Dutch state funds to make higher-risk investment which FMO is not prepared to fund from its own account resources. DEG and Proparco manage separate funds to make higher-risk investment, albeit much smaller amounts, representing only approximately 3% of their portfolios funded from their own capital. Norfund manages a negligible project and risk mitigation scheme funded by the Norwegian state, equivalent to 0.1% of its outstanding portfolio as at end-2020. BII manages two portfolios, a commercial 'growth' portfolio and a higher-risk 'catalyst' portfolio. These are both funded from its own account, but with different profitability expectations.[29] At the end of 2020 the 'catalyst' portfolio accounted for 7.8% of BII's portfolio. DFC does not currently manage external funds to undertake particularly high-risk investments, although we assume that the level of risk in DFC's own portfolio is high, as discussed in this section.

The management and use of external funds is likely to change. BII has indicated in its new strategy (2022–2026) that it will seek to engage in blended finance. Norfund manages a new climate investment fund which became operational in May 2022, which is fully funded by the state. DFC has also indicated in its strategy its intention to use blended finance, which could result in the creation of separate funds.

5.6 Reflections

While our observations vary among the studied DFIs, in some cases the overall level of risk taken might not ensure the highest possible additionality.

The study observes that Norfund, DFC and DEG take a level of risk that has the potential to result in high additionality. For BII we note its high use of equity, which has the potential to result in high additionality, but observe that the level of risk in the portfolio may not be as high as it could be. FMO and Proparco seem to be taking a lower level of risk. Considering the specific observations described in this section in relation to the studied DFIs and the insight institutions, the combination of at least most of the following approaches and factors might lead DFIs to take higher risks and result in the potential for higher additionality:

- Relevant support of sectors that are highly developmental and in high need of funding (e.g., infrastructure, agribusiness and financing directly to medium-sized enterprises).

[29] The catalyst portfolio 'may under certain circumstances entail losses which could be half of their invested capital' and there is 'no specified financial return' for the catalyst portfolio beyond the need to meet the overall return requirements for the total portfolio (BII, 2017: 39–40).

- Relevant support of geographies that are especially underdeveloped and in high need of funding (e.g., LDCs).
- Use of high-risk financial instruments, including equity and quasi-equity, as long as they are mostly used in the sectors and geographies highlighted above, and in projects that have reasonable growth potential while excluding mainstream commercial investments.
- Use of de-risking financial instruments, including guarantees and credit insurance.
- Implementation of risk management best practices applied in mainstream financial markets, in alignment with the level of risk necessary to achieve developmental objectives and implementing: (i) appropriate (not overstated) risk governance; (ii) reasonable self-imposed ratings when applicable (and without exceeding the corresponding rating-level requirements); and (iii) effective use of capital (as further described in Section 6).

6 Use of capital

6.1 Introduction

While development finance is expected to mobilise capital from various sources at a project level (see Section 9), DFIs' own capital may be used to leverage their balance sheets and expand their investment volumes. Effective use of DFI capital also implies utilising it to its maximum potential in relation to taking the level of risk that is required to result in high additionality.

The study has assessed the degree to which each DFI is maximising the use of its capital. The assessment was performed under a simplified approach,[30] concluding with observations that require further analysis, namely in relation to the DFIs that raise debt financing in capital markets, directly or through their controlling entities.

6.2 Leverage

In relation to leverage, i.e. the ratio of the use of debt funding (borrowed capital) to the use of equity funding, the studied DFIs fall into the following three categories: (i) with debt funding directly raised in the capital markets (FMO); (ii) with debt funding raised in capital markets by the corresponding controlling entities (DEG and Proparco); and (iii) without any debt funding (BII and Norfund), or with debt funding provided by the controlling country shareholder (DFC).

[30] Although our observations in this section are based on a technical and methodical assessment, particularly by addressing leverage and capital adequacy, it is not holistic or based on complete information to be considered conclusive. Further analysis is therefore suggested.

Table 5 Use of leverage, 2020

	BII	DEG	DFC	FMO	Norfund	Proparco
Debt funding directly raised in the capital markets						
Debt funding raised in the capital markets by the corresponding controlling entities						
Without any debt funding						
Debt funding provided by the controlling country shareholder						
Debt-to-equity ratio	NA	1.58	0.76	2.06	NA	4.21
Net debt-to-equity ratio	NA	1.51	0.61	1.30	NA	3.71

Source: Authors' calculations based on DFI annual reports.

Note: NA = not applicable.

Regarding the DFIs without any debt funding or with debt funding provided by the controlling country shareholder, we recognise that the corresponding country shareholders of BII (UK), Norfund (Norway) and DFC (US) raise funding in debt capital markets, and there are formal practices within their central treasuries that dictate the decision not to leverage their DFIs. However, we question the missed opportunity to mobilise significant volumes of private capital that could provide direct funding for development by optimising the use of the DFIs' balance sheets through the direct issuance of debt securities. In such cases, we would nevertheless expect that these DFIs do not target a AAA rating level for their debt securities, since this could reduce the level of risk taken (see sub-section 5.4 in relation to FMO and Proparco's rating implications).

While FMO is the only DFI that raises debt financing directly in capital markets, the study has identified limited leverage and a very high level of liquidity. At year-end 2020, FMO's debt-to-equity ratio was 2.06. Moreover, its sizable €2.2 billion position in liquid assets – which are naturally not development-related assets but are composed of deposits in the Dutch Central Bank and other banks (48% of total), and commercial papers, money-market funds, debt securities rated AA+ or higher, and related derivatives receivable (52%) – resulted in a net debt-to-equity31 ratio of just 1.30. Furthermore, FMO's liquidity coverage ratio (LCR), which results from dividing the amount of liquid assets by the expected net cash outflows over a 30-day period, was 1,116% as of year-end 2020, a notably excessive level, which compares to a 171.8% aggregate LCR

[31] Net debt is debt funding minus liquid asset portfolio.

of ECB-supervised banks at the same point in time. FMO's liquid assets position of €2.2 billion at the end of 2020 was equal to 37% of its debt funding and 29% of its outstanding portfolio, a remarkable level. This also has profitability implications since it results in a very high 'cost of carry' from the missed opportunity to invest more in development-related assets that yield more than liquid assets. The combination of the above-mentioned leverage and liquidity levels of FMO exceed the requirements to achieve a AAA rating according to our consideration of the applicable rating methodologies, namely given the formal agreement with the Dutch state, who commits to support FMO to meet its financial obligations on time and safeguard solvency (this is highlighted by the rating agencies as a key driver of FMO's AAA rating).

In relation to DEG and Proparco, the study has not assessed the degree of the use of capital by the corresponding overall groups of which they are part, recognising that KfW (DEG's majority shareholder) and AFD raise funding in the debt capital markets. Under the hypothetical scenario that DEG and Proparco's current debt financing (almost entirely provided by KfW and AFD, respectively) would instead be represented by debt raised in the market, DEG's leverage would be very low (1.58, i.e., below FMO's), and Proparco would present the highest level among the studied DFIs, with a debt-to-equity ratio of 4.21 as of year-end 2020.

In turn, TDB maximises its debt funding level, in addition to taking an overall effective approach to capital utilisation, as described in the next sub-section. BDMG has increasingly been leveraging its balance sheet with non-state-related funding, including by obtaining debt financing from several regional DFIs, private sector investors, and interbank and time deposits. While so far marginal in relative terms, PIDG has raised debt funding at EAIF and GuarantCo from a few sources, including a couple of DFIs, a G7 country and the private sector. While there is potential for increased leverage, particularly in EAIF, PIDG's approach results in the mobilisation of high volumes of capital at the project level, as described in Section 9.

6.3 Capital adequacy

As mentioned in the introduction to this section, using capital effectively implies utilising it to its maximum capacity towards taking the necessary level of risk which can result in high additionality. In this regard, capital adequacy measures a bank's available capital in consideration of its risk-weighted assets.

In the case of FMO, its Common Equity Tier 1 (CET1) ratio, which results from dividing the amount of Tier 1 Equity[32] by risk-weighted assets,[33] was high at 23.3% as of year-end 2020. This is unsurprising considering the level of risk and leverage mentioned in Section 5 and in the previous sub-section, respectively. A high CET1 ratio implies that there is potential for considering a higher amount of debt funding (and hence investment volume) and taking a higher risk level. In comparison, the aggregate CET1 ratio for banks supervised by the ECB was 15.6% as of the same date, and the ECB's 2022 overall requirements and guidance is 10.6%. In addition, FMO's total capital ratio was 24.9%, while the aggregate of ECB-supervised banks stood at 19.5%, and the overall ECB requirement and guidance for 2022 is 15.1%.

DEG's CET1 ratio as of year-end 2020 was 20.1%. Considering that DEG's leverage is 23% lower than FMO's (1.58 versus 2.06 debt-to-equity ratio, respectively), the fact that, despite this, its CET1 ratio is lower than FMO's reaffirms the observation in sub-section 5.2 that the level of DEG investees' risks is high.[34] However, we maintain the observation in sub-section 6.2 that DEG's leverage is very low (especially when considering that none of its debt funding is raised directly in capital markets), resulting in an excessive capital adequacy level, which more than doubles the regulatory requirement of 10.5% for its CET1 ratio. Furthermore, DEG's internal target CET1 ratio is 14%, and it is underutilising the amount of risk-weighted assets allowed by KfW. As in the case of FMO, there is potential for DEG to consider a higher amount of debt funding (and hence investment volume) and take a higher level of risk.

Proparco's capital adequacy ratios were not available.

At the same time, TDB maximises the use of its capital according to the requirements to achieve its target credit rating, and it achieves an 'extra utilisation' by effectively applying risk management tools. For example, TDB utilises insurance products in relation to the callable capital of the lowest-rated shareholders to help improve TDB's credit rating.[35] Insurance is also used to reduce the excessive capital

[32] Tier 1 equity is 'core capital', which mostly includes common shares and retained earnings.

[33] The amount of risk-weighted assets results from multiplying each asset by a percentage that represents the level of risk. For example, cash balance is multiplied by 0%.

[34] Note that the leverage (i.e., debt-to-equity ratio) does not contemplate the level of risk while the CET1 ratio does.

[35] Approximately 80% of TDB's capital is callable and only a few of the shareholders that committed such capital are rated investment grade. To strengthen this matter,

utilisation that results from obligor, sector and geographic concentration risks. As of year-end 2020, 29% of TDB's gross loan portfolio – $1.6 billion – was insured. Furthermore, TDB makes an important use of alternative funding instruments: callable capital represents approximately 80% of its total capital, subordinated debt has been issued, and it plans to soon place new non-voting green shares in the market, to be traded in two exchanges, with the expectation of leveraging the proceeds at a ratio of 1 to 3.

BDMG has been expanding its approach to managing capital adequacy by increasing leverage, tapping into additional sources of funding and using additional financial instruments (including the issuance of sustainable bonds). Moreover, BDMG has been working with local partners to establish credit guarantee funds covering first losses and allocating a portion of BDMG's profits to such funds. This represents an effective allocation of capital.

We note that, while we believe that the approach towards the use of capital by TDB, and increasingly BDMG, is more advanced and effective than in the case of the other studied DFIs, their approach represents common practice among commercial and investment banks.

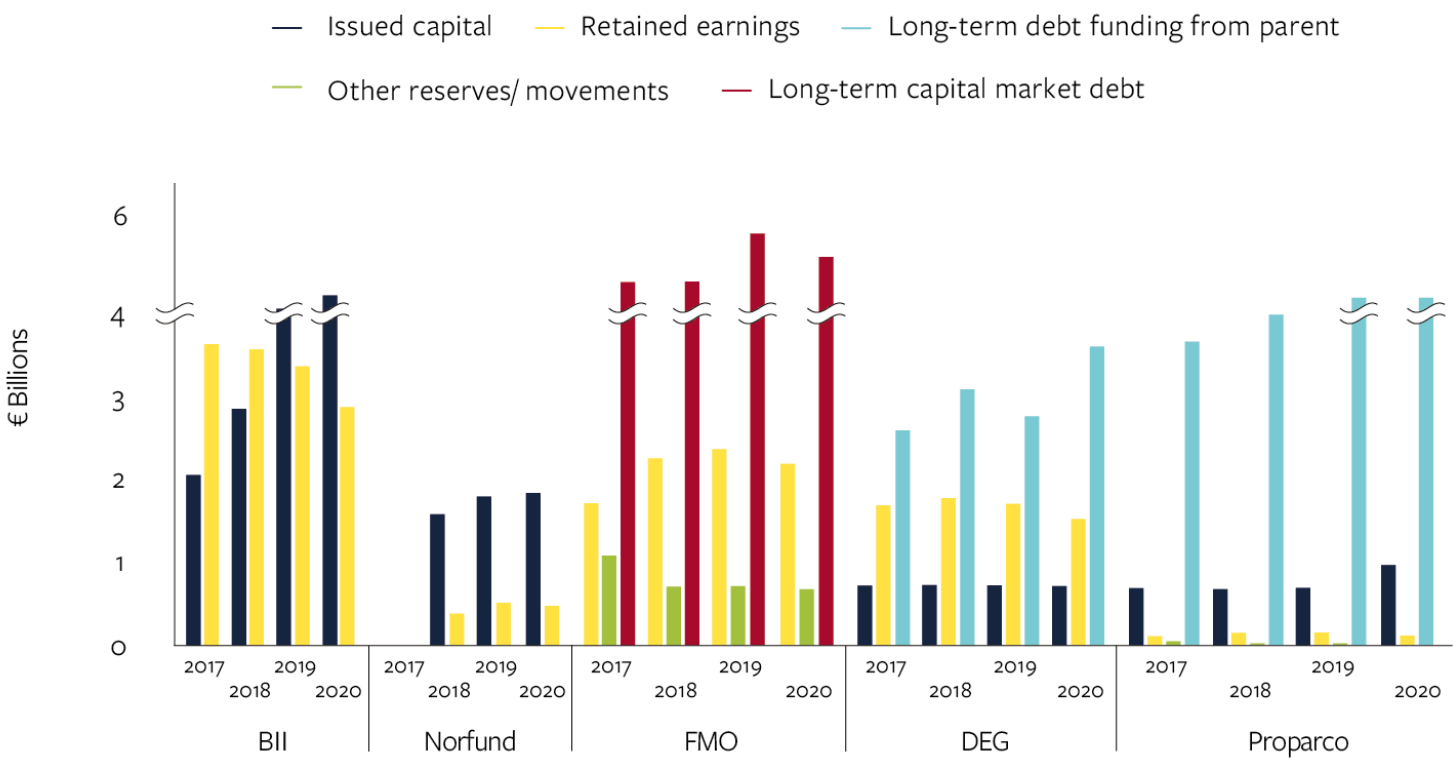
6.4 **Funding**

Figure 5 details the year-end funding sources of the studied DFIs over the period 2017–2020.

In sub-section 4.2 we note that the studied DFIs all grew their portfolios during the period 2017–2020, some significantly (BII and Proparco). For DFIs which are 100%-owned by the state and which do not borrow, growth has been financed by annual capital injections. BII received a significant capital injection of £3.5 billion during the period 2017–2021, and Norfund saw small annual capital injections. DFC's portfolio in 2020 increased by 16% from OPIC's portfolio in 2019 because of the BUILD Act, which doubled its investment capability to $60 billion from $29 billion for OPIC. This is funded by a mix of borrowing from the US Treasury and budget appropriation. DFC's portfolio will continue to expand in line with this increased investment capability, and it may rise even further as a new Bill, the America COMPETES Act in 2022, includes a provision to increase this capability to $100 billion.

particularly towards achieving a higher credit rating for TDB, the institution secured insurance policies where, in the case that capital is called, the insurers would pay the callable capital to TDB and at the same time lodge a claim with the corresponding shareholders. This enables TDB to minimise any disruption and for it to remain operational in this circumstance.

Figure 5 DFI funding sources, 2017–2020



Source: Authors' calculations based on DFI annual reports.

For FMO, which is 51%-owned by the state, growth has been financed predominantly by increased borrowing from capital markets. However, its portfolio grew at a compound annual rate of just 4% a year, the second-lowest rate among the studied DFIs. Proparco and DEG's growth has also been primarily funded by borrowing from their controlling entities, which issue debt on capital markets.

Considering all of the above, while the DFIs have been able to grow their portfolios during the period under study, this may not continue without them making better use of their balance sheets, also given that annual net incomes have been low to negative. Dependence on funding from countries and controlling entities may not be sustainable, or at least may not result in the portfolio growth necessary to address the pressing needs of LICs and middle-income countries. We refer to our comments in the previous sub-sections in relation to leverage and lower liquidity levels.

6.5 Reflections

While lately much attention has been paid to increasing capital mobilisation at the project level, importance should also be given to DFIs using their own balance sheets more effectively. This would allow for increased volumes and overall level of risk taken. Furthermore, some of the tools that may maximise the DFIs' capital

utilisation can also result in relevant mobilisation ratios at project level (e.g., securitisation structures).

The studied DFIs overall present limited to no leverage through debt directly issued in the market, high capital adequacy ratios and in some cases excessive liquidity levels, revealing that there is a missed opportunity to increment the size of portfolios, take additional risks and increase capital mobilisation from various sources, and hence to amplify additionality. This is generally in alignment with the findings for MDBs as outlined in the recently published report of the independent review of MDB capital adequacy frameworks (G20, 2022).

In relation to the above, we find that the DFIs' overall approach to financial and risk management does not completely adopt practices in the mainstream banking sector. We do not identify technical barriers to DFIs adopting such practices; we particularly highlight TDB's approach, described in this section. The above reflections are particularly important at this juncture. While the studied DFIs have been able to grow their portfolios during the period assessed, this growth may not be sustainable without adjusting the approach to capital utilisation. Annual net incomes have been low to negative, and growth has overall been highly dependent on capital injections and funding from countries and controlling entities. While FMO funded its growth primarily with increased borrowing in the capital markets, its portfolio grew at a compound annual growth rate of just 4% per annum, the second lowest rate among the studied DFIs.

7 Profitability

7.1 Introduction

The study has assessed the DFIs' profitability, in terms of overall approach and consequent financial results, as a factor that may affect their capacity to take the necessary level of risk and operate effectively.

Operating under reasonable cost structures, applying appropriate pricing approaches and supporting projects that demonstrate acceptable financial profiles (regardless of the level of risk taken) are basic practices expected from any FI. Deviation from these practices reduces the ability to take risks, maximise the use of capital, achieve financial sustainability and attain objectives (i.e., be particularly developmental, in the case of DFIs). Diverging from these practices may also distort markets, with harmful results for private capital mobilisation.

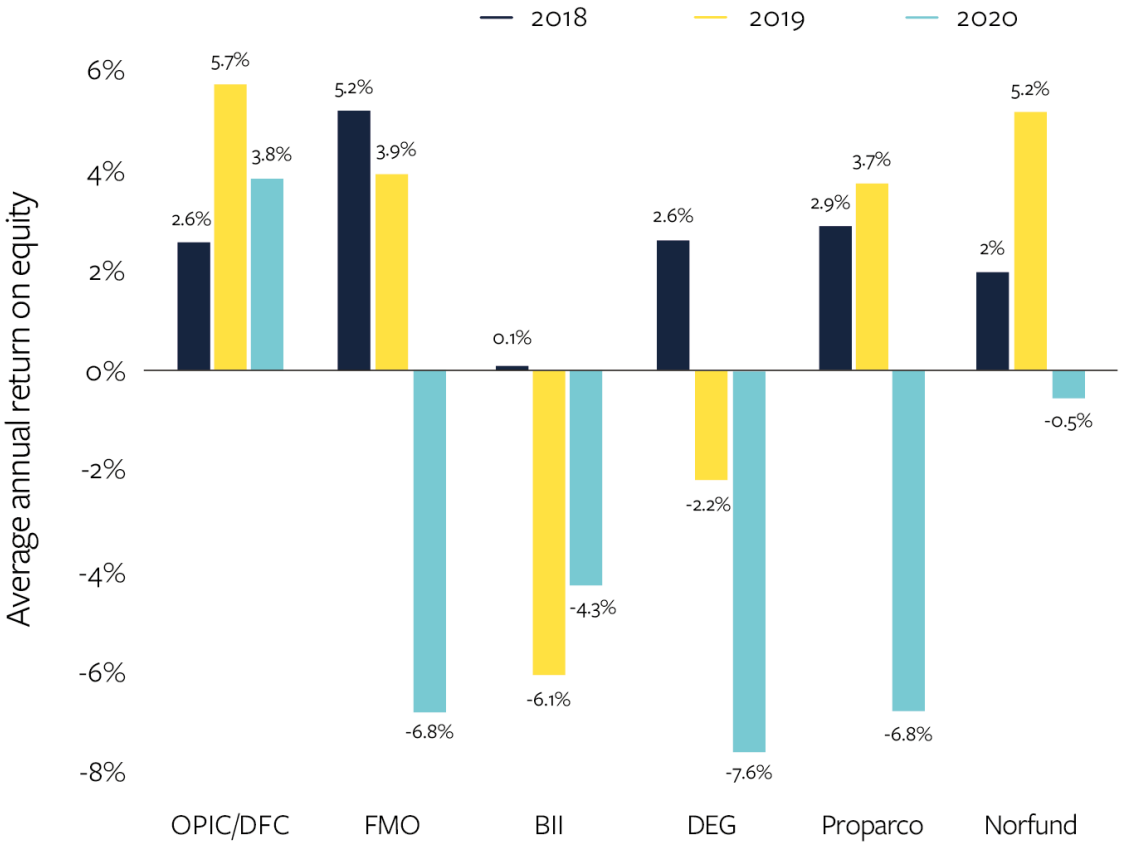
7.2 Overall profitability

Figure 6 presents the average annual return on equity[36] of the studied DFIs over the period 2018–2020.

During the period 2018–2020, the average annual return on equity of the six DFIs was almost zero, and the median was 2.3%. In 2020, except for DFC, the remaining studied DFIs presented net losses in 2020, and BII and DEG also posted losses in 2019. Net losses evidently erode capital, limiting investment capacity and risk-taking.

[36] We calculate return on equity as net income for the year divided by average of opening and closing shareholder/s' equity for the year.

Figure 6 DFI average annual return on equity, 2018–2020



Source: Authors' calculations based on DFI annual reports.

The net losses of the DFIs that presented results during the period studied (i.e., all except DFC) were mostly driven by loss of value of their equity portfolios,[37] including due to the devaluation of the corresponding local currencies. While this is understandable given the risks to which such investment instruments are exposed, overly high losses may put into question the reasonableness of at least a portion of the investments in such portfolios. This is particularly the case for BII, with 2019 and 2020 losses from its equity portfolio aggregating £624 million (approximately 9% of capital), and with a relatively low profit in 2018.

In addition, the level of operating costs and the pricing approaches of some of the DFIs may not allow them to maximise their full potential for profit reinvestment and risk-taking. This is addressed in the following two sub-sections.

DFC and Norfund exhibited the highest returns on equity among the DFIs during 2018–2020, equal to 5.7% and 5.2%, respectively for

[37] Some include unrealised losses, which may or may not materialise.

2019. Furthermore, in 2020, DFC was the sole DFI with a positive net income, and Norfund posted the smallest net loss.

The analysis indicates that, overall, the studied DFIs operate under relatively low expectations in relation to profitability. BII aims to achieve a weighted cumulative investment return of at least 2% for the 2022–2026 period, and to remain financially sustainable (BII, 2022).[38] The DFC's BUILD Act removed the prior requirement to be financially self-sustaining (albeit it also does not target to operate under losses). DEG and Proparco have a global mandate to be self-sustainable, with Proparco setting a minimum target return which is reviewed each year by its Board (undisclosed for this study). FMO sets a target return on equity for every year, which was 6% and 4% for 2020 and 2021, respectively. Finally, the Norfund Act states that the institution will 'engage in viable and profitable undertakings', which is effectively put into practice considering the current cost level (the lowest among the studied DFIs with available relevant data) and the approach to pricing (its loan portfolio yielded the highest return); these issues are addressed in the following two sub-sections. Norfund sets an expected annual gross portfolio return since inception, currently equal to 5%, which compares to prior expected returns of 7–8% 5 to 10 years ago.

At the same time, TDB and BDMG's average return on equity during the 2018–2020 period was 11.4% and 4.5%, respectively. Their best practices approach to risk and financial management has an important impact on their profitability. We underline that BDMG's average individual investment size and tenor is significantly lower and shorter, respectively, than those of the studied DFIs, therefore requiring more operational efforts. During 2020, BDMG's average investment size ranged between approximately $40,000 and $60,000 (dollar-equivalent), which we estimate is equal to less than 1% of the average size of the studied DFIs' individual investments, and 77.6% of its portfolio as of year-end 2020 matured within the next three years. BDMG reduced by more than 50% the average individual size of its investments during 2020, and it posted a relevant allowance for loan losses as a result of the pandemic; however, it operated profitably, while the studied DFIs, with the exception of DFC, presented net losses in that year.

PIDG has a comprehensive overall approach to profitability, with widening and increasing risks as the group's businesses develop, and in the meantime posting relatively low group net losses, which decreased during the studied period and totalled -$8.8 million in 2020. EAIF and GuarantCo have overall posted net profits in the 2018–2020 period, partially offsetting InfraCo Asia and InfraCo

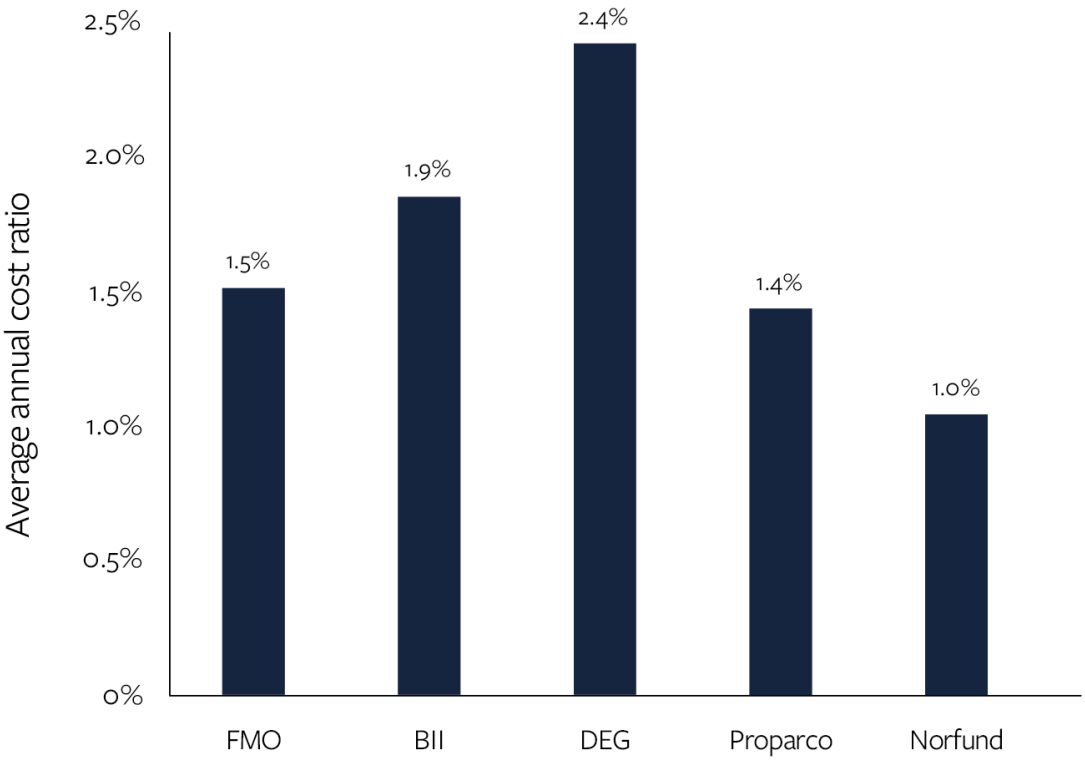
[38] BII's prior portfolio return targets for the 2017–2021 period were positive return for the overall portfolio, and 3.5% average annual return for the 'growth' portfolio.

Africa's losses as they evolve towards established businesses. EAIF's average return on equity during the 2018–2020 period was 5.8%. GuarantCo presents low albeit overall positive profits given the particularities of its credit guarantee business (while noting recent strains on profitability due to idiosyncratic project challenges). Guarantee funds normally operate at low profit levels since guarantee fees are low when compared to interest rates of loans, income on the investment portfolio that backs guarantees yield low returns as it has to be invested in low-risk securities, and management fees tend to be relatively high to the operational burden. Furthermore, guarantee claims result in volatile annual net results, which may be negative.

7.3 Cost structure

Figure 7 presents the average annual operating costs-to-portfolio amount ratios ('cost ratio') of the studied DFIs (except DFC) over the period 2018–2020.

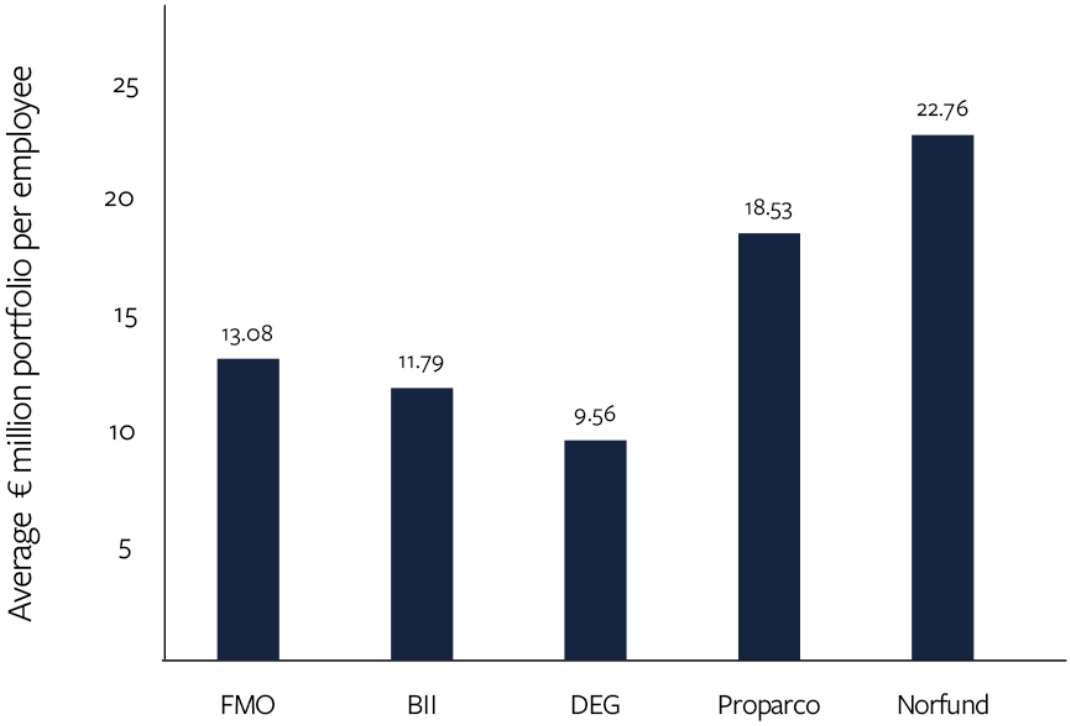
Figure 7 DFI average annual cost ratio, 2018–2020



Source: Authors' calculations based on DFI annual reports.

The average annual cost ratio of Proparco, FMO, BII and DEG during the period 2018–2020 ranges between 1.4% and 2.4%.[39] This compares to 1.0% in the case of Norfund and 0.8% in the case of TDB. The study reveals that the differences in the cost ratio levels coincide with the results of another efficiency ratio: the number of staff in relation to the corresponding size of the outstanding portfolio (Figure 8).

Figure 8 DFI average € million of outstanding portfolio per employee, 2018–2020



Source: Authors' calculations based on DFI annual reports.

For example, of the studied DFIs, DEG has the highest cost ratio, averaging 2.4% during 2018–2020, and the lowest outstanding portfolio per staff, averaging €9.6 million during the same period. At the other extreme, Norfund's 1.0% average cost ratio links to an average outstanding portfolio of €22.8 million per employee, and the 0.8% cost ratio of our insight institution TDB relates to an average outstanding portfolio of €22.8 million per employee during 2018–2020.

39 DFC's cost ratio could not be reasonably calculated based on available data.

As an additional point of comparison, private impact investing funds that invest in developing countries do not normally exceed cost ratios of 2.3% (Tameo, 2021). However, the portfolio sizes of such funds are currently a fraction of those of the studied DFIs, and we estimate that their cost ratios could reach approximately 1.4% if they operate at the same scale as DFIs.

BDMG and PIDG's cost ratios, which average 3.6% during 2018–2020 and 4.7% during 2019–2020, respectively, are not comparable to those of the studied DFIs, as their missions require more operational efforts. BDMG's portfolio is mostly focused on SMEs, providing financing of relatively low amounts. PIDG's entities invest in infrastructure, requiring relevant due diligence, structuring and portfolio management efforts, which demands the services of external portfolio managers.

7.4 **Pricing approach**

Applying proper pricing approaches that consider both financial sustainability and market conditions is necessary for sustaining risk-taking and avoiding market distortions.

A financial best practice approach among commercial and investment banks is to price risk-taking transactions, including investments, in consideration of their costs and expected risk-adjusted return on capital. This approach is crucial to at least achieve financial sustainability in the long term. The applicability of this approach is through the use of simple models normally referred to as risk-adjusted return on capital- (RAROC)based models. According to our study, DEG and Proparco are the only DFIs studied that use such a model.

The average returns of the loan portfolios of the studied DFIs[40] during the 2018–2020 period range between 5.8% and 7.4%. The lowest average return was posted by DEG (which could put into doubt the efficacy of its pricing model) and the highest was posted by Norfund. This compares to TDB's average portfolio return of 8.0% and BDMG's of 9.9%, both of which utilise RAROC-based pricing models.

In relation to equity investments, as mentioned in sub-section 7.2, the recent high losses of the DFIs' equity portfolios may question the decision approach to such investments and hence the potential for reasonable long-term financial returns of the equity investment portfolios.

[40] Excluding DFC due to lack of information.

7.5 **Reflections**

While recent net losses among most of the studied DFIs may be down to circumstances, and we understand that DFIs as public institutions may decide to function under low profitability levels, the basic practices expected of any FI are to operate under reasonable cost structures, to apply appropriate pricing approaches and to support projects that demonstrate acceptable financial profiles (regardless of the level of risk taken). However, the study has identified possible oversized cost structures (except in the case of Norfund), a lack or ineffective use of pricing models, and potentially weak approaches to equity investments. Consequently, the DFIs' profitability might have been lower than it could have been, limiting their investment capacity, risk-taking level and utilisation of their capital base.

While we recognise that TDB's business may not be fully comparable with that of the studied DFIs, the financial risk management practices and consequent financial results summarised below are worth highlighting:

- A reasonable operational structure has resulted in a cost ratio that is lower than that of the studied DFIs (although close to that of Norfund).
- An adequate pricing approach has led to a loan portfolio that yields higher than that of the studied DFIs.
- Its financial risk management practice, which is tuned to a BB+/Baa3 rating, has resulted in reasonable returns and adequate cost of funding (in addition to sizable capital mobilisation at balance sheet level).
- Consequently, all of the above have resulted in an average return on equity of 11.4% during 2018–2020, while the average of the DFIs' annual return on equity during the same period is almost zero, and the median is 2.3%.

8 Governance

8.1 Introduction

Governance plays a fundamental role in setting the strategic direction and in the business execution of an organisation. Governance overall comprises organisational structure, the responsibilities of divisions and committees, and lines of reporting and accountability. In the case of FIs, including DFIs, governance specifically establishes the overall financial risk management approach, including risk appetite, approach to funding and liquidity, the investment approval process and internal controls, among other important financial risk management matters.

The governance of DFIs is a key determinant of their approach to risk, offering financial products that can result in high additionality, maximising capital utilisation, attaining a reasonable cost structure and profitability, and mobilising capital.

We briefly touch on governance due to its centrality for the efficiency and effectiveness of DFI operations, and we offer some initial observations in some key areas. A detailed review and assessment of governance is outside the scope of this study but would be the logical next step to understand how governance affects the DFIs' level of risk taken, profitability, use of capital and capital mobilisation.

8.2 The DFIs' approach to governance

A recent ODI review of the literature on corporate governance finds broad consensus in favour of governance structures which increase DFIs' independence from their political owners. Good practice includes: (i) the existence of multiple shareholders; (ii) an independent Board of Directors; (iii) separation between the Board of Directors and executive management; and (iv) independent supervision. For DFIs this can help ensure the right balance between integration with government policy and independence (Attridge et al., 2021).

Each of the studied DFIs has a single country as the controlling shareholder.[41] FMO and Proparco are the only two of the six studied DFIs that have a diversified shareholding. However, the Netherlands

[41] Indirectly via KfW and AFD in the cases of DEG and Proparco, respectively.

and France hold majority stakes in these DFIs, respectively equal to 51% and 78.2%, therefore exercising control. While the study recognises the existence of 'independent' members within the Boards of both institutions, as well as in BII's, the relevant influence of the controlling country shareholders might limit the benefits that multiple shareholders and/or independent Board members would normally bring to a non-DFI. Moreover, regardless of the shareholder being represented, Board members with applicable backgrounds and experience can positively contribute to good governance. A DFI Board should ideally be composed of professionals who, in the aggregate, combine extensive experience in finance and international development policy. However, the study cannot conclude that this is the case for all of the DFIs.

The line of reporting, and location within the organisational structure, of specific positions and departments that play key roles in performing checks and balances, also have an important influence on the quality of governance and therefore on business execution. Critical checks and balances include the independence of internal audits and the existence of a Chief Risk Officer (CRO), reporting directly to the Chief Executive Officer (CEO). In this regard, among the DFIs studied we identified some divergence from usual governance practices, for example: (i) DEG's Internal Audit does not report to the Board but to the CEO; (ii) FMO and DEG have small Senior Management Teams composed of three executives, and DEG's CRO does not report to the CEO; (iii) Norfund's CRO position is combined with other functions including finance and human resources;[42] and (iv) we note that BII and DFC did not have a CRO position until recently (incorporated in 2020).

The above observations may also lead the DFIs to adopt risk management practices that are not entirely aligned with those in FIs overall, as described in sub-section 5.4.

8.3 **Reflections**

Governance has both overarching and granular implications in an organisation, and therefore an appropriate approach to governance is critical.

The cursory look at key governance areas in the previous sub-section suggests that, in some areas, some of the studied DFIs seem not to be entirely aligned with governance best practices. In our view some of these gaps may explain the observations presented in this working paper in relation to the level of risk taken, profitability, use of capital and capital mobilisation in some DFIs.

[42] We also highlight the occurrence in 2020 of a fraud valued at $10 million, which evidenced inadequate internal controls and risk management governance.

While the DFIs may make efforts to address specific gaps in these areas, limited progress will be accomplished if their governance is not improved, namely in relation to (i) increased contribution from independent Board members, possessing applicable skills and expertise; (ii) strengthened practices of internal controls, especially in relation to independence; and (iii) more effective checks and balances, with improved practices in relation to processes and to the organisational positioning and authority of the following bodies: internal audit department, CRO, CFO, risk management committee and independent mechanisms. Even a significant expansion of their capital size might not result in a relevant advance in, for example, the level of risk taken if governance is not enhanced. In fact, increased capital would not be advisable if its current utilisation is not being maximised.

Meanwhile, the study identifies that TDB, BDMG and PIDG present a governance practice that is overall aligned with best practices, with the positive results evidenced in previous sections.

9 Mobilisation of private capital

9.1 Introduction

Mobilisation is critical as it is the only way to generate the sufficient scale of capital required to support attainment of the SDGs and the transition to low-carbon, climate-resilient growth. In 2016, G20 countries adopted the 'Hamburg Principles' for MDB mobilisation and endorsed a target of increasing mobilisation levels by 25–35% in 2020 from 2016 levels. Some bilateral DFIs in this study have explicit mobilisation objectives, and some do not, although these DFIs are under pressure or likely to come under pressure from shareholders to step up mobilisation efforts in light of the widening SDG financing gap and the climate emergency.

Analysis on mobilisation for this study and more broadly is severely constrained by a complete lack of transparency. Two issues of concern are noted here: (i) different methodologies are used to calculate mobilisation by DFIs and MDBs as a collective group and by the Organisation for Economic Cooperation and Development (OECD),[43] and some of these methodologies are questionable in parts (e.g., in relation to lines of credit); and (ii) disaggregated or semi-aggregated data by sector, geography or instrument is not published at the institutional or collective level.

9.2 Measurement of mobilisation

At the international level MDBs and DFIs define mobilisation as investment by a private entity, and they distinguish between direct and indirect mobilisation. Direct mobilisation arises because of the 'direct and active' involvement of the MDB or DFI which results in new private investment. Indirect mobilisation arises when a new investment is made by a private entity where there is also MDB or DFI investment in the project or business, but the MDB or DFI has not played an 'active or direct role' (World Bank, 2018).

[43] See https://www.oecd.org/dac/financing-sustainable-development/development-finance-standards/mobilisation.htm

The OECD has developed a different measurement approach and does not distinguish between direct and indirect mobilisation (OECD, 2020).

The study notes that several bilateral DFIs are increasingly expressing reservations about the limitations of these international conceptual and measurement frameworks. For example, current methodologies tend to measure mobilisation at the transaction level (e.g., co-investment in direct equity and debt deals, co-investment in funds, medium- to long-term risk-sharing with FIs) but do not capture mobilisation at the DFI level, for example as a result of DFIs leveraging their balance sheets (e.g., debt issuance in capital markets, securitisation of portfolios). Neither do the methodologies capture exit mobilisation. It is, however, beyond the scope of this study to define mobilisation, and we use the data published by the OECD as it is available at the institutional level.

9.3 **Mobilisation ratios**

Table 6 presents our estimated simple mobilisation ratios for three of the studied DFIs. In the absence of disbursement data for these DFIs, we calculate the ratios based on commitments data.

Table 6 Estimated simple mobilisation ratios[44]

	Commitments (Euro millions)				Mobilisation (Euro millions)				Mobilisation ratio			
	2018	2019	2020	2018-20	2018	2019	2020	2018-20	2018	2019	2020	2018-20
BII	1,175	1,958	1,367	4,500	479	754	486	1,719	0.4	0.4	0.4	0.4
Norfund	352	406	457	1,215	73	46	155	273	0.2	0.1	0.3	0.2
Proparco	1,363	1,690	1,434	4,487	1,036	2,476	1,128	4,639	0.8	1.5	0.8	1.0
OPIC/DFC					*2,557*	*5,062*	*3,733*	*11,352*				

Source: Mobilisation data were obtained from the OECD, in relation to calendar years.[45] Annual commitments data were obtained from the corresponding DFIs' annual reports.

Note: OPIC and DFC mobilisation data are for their financial year ended 30 September. FMO and DEG only report partial mobilisation data to the OECD. DFC commitments cannot be calculated on a calendar year basis as annual reports are

[44] We calculate mobilisation ratios by dividing the amount of private finance mobilised by the amount of DFI investment, so a ratio of 1.5 means that €1 of DFI investment mobilises €1.5 of private investment.

[45] https://www.oecd.org/dac/financing-sustainable-development/development-finance-standards/mobilisation.htm. We use this data as it is reported and calculated in a consistent manner, enabling comparability.

based on financial year, which runs to 30 September. Therefore, the mobilisation ratios of these three DFIs are excluded from the table.

There is little research on DFI mobilisation and very poor data, so it is difficult to know what a good mobilisation ratio is, what effective approaches are and how these vary. This will of course vary by sector, geography, instrument and time. However, we can confidently state that the mobilisation ratios of BII, Norfund and Proparco, which range from 0.1 to 1.0 during 2018–2020, are extremely low. Although we cannot calculate comparable mobilisation ratios for DFC, we can get an insight from its 2020 annual report, which states that DFC committed $4.6 billion in the financial year ended 30 September 2020, and this is expected to mobilise $6.8 billion, implying a mobilisation ratio of 1.5. This mobilisation level is likely reflective of the higher use of guarantees by DFC.

The DFI mobilisation ratios that we have estimated are low, especially when compared to impact investing funds which use public and philanthropic catalytic capital (e.g., equity, subordinated tranches and guarantees). These impact funds typically leverage multiples of private capital three to four times their catalytic capital. Examples include the Huruma Fund[46] managed by GAWA Capital, where catalytic first loss and subordinated debt has resulted in a private capital mobilisation ratio equal to 3.0; the Agri-business Capital (ABC) Fund[47] managed by Bamboo Capital, where public catalytic first loss capital of €50 million is targeting a total fund size of €200 million, leveraging first loss capital by approximately three times; and the Land Degradation Neutrality Fund[48] managed by Mirova, where the junior catalytic capital is expected to leverage three to four times the catalytic capital, targeting a fund of $250 million.

BII and Norfund state that it is challenging to mobilise commercial capital at scale into their target markets given the smaller universe of investors willing to invest in the level of risk in which they invest. These DFIs hold the view that mobilisation is not the prime objective in these markets, at least in the short term. Rather, the objective here is the creation of markets through investment which proves business models or the viability of investment. This kind of ‘demonstration’ investment can contribute to a stronger investment climate with mobilisation of commercial capital at scale being a longer-term aspiration as these markets mature.

[46] https://fondohuruma.com/en/

[47] http://agri-business-capital.com/contact.html

[48] https://www.unccd.int/land-and-life/land-degradation-neutrality/impact-investment-fund-land-degradation-neutrality#:~:text=What%20is%20the%20LDN%20Fund,implemented%20by%20the%20private%20sector

9.4 **Mobilisation approaches**

The mobilisation potential of instruments also varies. For example, an intrinsic goal of intermediated fund investment is mobilisation, so it will most likely have a higher mobilisation effect than direct equity investment in a project or company, which most likely prioritises development impact over mobilisation. For example, investment in a fund not only mobilises private investment into the fund, but it also mobilises private investment at the project or company level when the fund invests at this level. 'Fund-of-fund' structures[49] can have even greater mobilisation potential as this structure also mobilises private investment in the 'fund-of-funds', which then mobilise private investment into the funds it invests in, and these funds in turn mobilise more equity and debt investment at the project level. For example, at the end of 2020, DEG had €1.2 billion invested in 130 private equity (PE) funds. These funds have provided a total of €12.1 billion of investment to the companies they co-finance. As an anchor investor, DEG strengthens the capital base of the PE funds it invests in, helping to mobilise private investors into the PE funds. It is also interesting to note in this context that BII's mobilisation ratio has been decreasing since 2016, when it was 0.73, perhaps due to a change in its product mix away from intermediated equity to direct equity and debt.

Simple debt co-financing, especially where DFIs are investing *pari-passu* with private investors (e.g., senior debt) will have a lower mobilisation effect than loan syndication. FMO and Proparco are active arrangers of syndicated loans using A/B loan structures.[50] Other studied DFIs such as Norfund participate in some of these syndications through parallel A structures, but they are not active arrangers.

Another important approach to mobilisation is third-party fund management. FMO is unique among the studied DFIs, as it has its own subsidiary investment management company, FMO Investment Management BV (FMO IM), which manages third-party investment funds and co-invests these alongside its own capital. At the end of 2020, the total amount of commitments from external investors in FMO IM-managed funds was approximately €635 million. While this

[49] A fund-of-fund structure is a pooled investment fund that invests in other types of funds.

[50] DFIs attract banks and institutional investors as co-financiers in projects through 'A/B loan' structures. Under these structures, DFIs finances the A portion of the loan, and partner with financial institutions and investors to provide the B loan. The DFIs remain the 'lender of records' in these structures, benefiting the borrowers and the FIs and investors, reducing risks (given the DFIs' 'preferred creditor treatment' in most cases) and resulting in withholding tax savings, among other benefits.

volume is relatively low, equal to 8.5% of FMO's outstanding portfolio granted from its own capital, this approach is a relevant component of FMO's aim to mobilise commercial capital. It is also an important way and good example of how DFIs can pursue the mobilisation agenda by providing access to FMO's deal flow, but it requires structuring capability and an appetite to manage third-party funds. Here, private investors (mostly institutional) commit a level of investment to the fund which is governed by an overarching agreement with FMO IM. FMO originates deals which, if they meet FMO IM's eligibility criteria, are automatically available for its managed funds to participate in. FMO manages four debt funds which have attracted pension funds, insurance companies, private banks and wealth managers. Ticket size is a constraint as many pension funds will only invest at scales above FMO's current operations (Spratt et al., 2020). This 'originate to distribute' approach of FMO IM, where FMO acts as an intermediary, is an important approach which can mobilise institutional investors into DFI-managed funds. This compares with the overall 'originate to hold' approach of the other studied DFIs.

In addition, as noted in sub-section 5.5, FMO and, to a more limited extent, DEG and Proparco, manage external funds with capital provided by the corresponding states, which enables them to take higher risks by deploying catalytic capital that helps structure investment in pursuit of this goal. Climate Investor One (CIO),[51] established by FMO with Phoenix InfraWorks, is a good example of the use of external funds managed by DFIs to provide high-risk catalytic capital to facilitate early-stage investment with the aim of mobilisation. To date, CIO has mobilised just over five times its original catalytic investment.[52] CIO focuses on renewable energy investments and has three separate funds which invest in early-stage infrastructure development, construction financing and then refinancing once the asset is operational through a pooled DFI and institutional investor refinancing fund. It uses blended concessional finance to deploy instruments which mainly focus on early-stage investment, and which adjust the risk and return profile over the project lifecycle.

Regarding our insight institutions, PIDG and TDB present effective approaches to capital mobilisation. One frequently quoted constraint to mobilising private investment at scale is the lack of investable infrastructure pipeline. PIDG's entities deploy public capital in a catalytic way to address this constraint. PIDG aims to play the role of

[51] https://www.climatefinancelab.org/project/fmo-climate-development-finance-facility/

[52] CIO mobilised $2.1 billion including $800 million from private investors on an initial investment of $370 million in catalytic public and private capital. See https://www.climatefinancelab.org/climate-finance-impact-investments/

a market maker rather than market taker, using catalytic risk capital to develop and create infrastructure assets which private investors can invest in. PIDG provides a range of financial products across the infrastructure project lifecycle. Few developers can or are willing to provide the necessary risk capital to develop infrastructure projects with risks that are in the higher range, and few DFIs do this. PIDG therefore fills a critical gap in the market. Using PIDG mobilisation data calculated under the OECD method, and considering reported investment commitments, PIDG's mobilisation ratio over the period 2018–2020 stands at 1.9,[53] much higher than the ratios we have been able to estimate for three of the studied DFIs. Interestingly, PIDG also assesses the pathways to mobilise at scale and the ability to replicate transactions as part of its credit and investment committee approvals. Furthermore, while securitisation as a means of mobilising institutional investors at scale is rarely undertaken by DFIs, PIDG is exploring pooling approximately seven to nine infrastructure assets which are operational and issuing bonds to institutional investors with a first loss guarantee that would be provided by a PIDG entity.

TDB makes substantial use of alternative funding instruments to mobilise capital into the projects it funds. It is very much focused on an 'originate to distribute' model, in contrast to the overall 'originate to hold' model of the studied DFIs. As mentioned in sub-section 6.3, much of this is undertaken by innovative balance sheet operations driven by TDB's risk management approach to optimise the use of its capital and meet prudential limits. Risk in excess of TDB's obligor, sector or geographic limits is managed through down-selling and insurance. TDB is also a leading arranger of syndicated loans in Africa, and it has developed a wide range of syndicate partners with comprehensive automation of asset distribution and proactive secondary loan trading.

BDMG has not focused on mobilisation to date, but it recognises the necessity to do so strategically going forward. BDMG notes that it will take time for the institution and its culture to change and develop the necessary capability.

9.5 DFIs' mobilisation objectives and strategies

To help understand current levels of mobilisation it is instructive to look at the importance attached to this goal in DFI objectives and

[53] Calculated as $2.77 billion mobilised using OECD methodology divided by PIDG commitments of $1.46 billion over the period 2018–2020. It should be noted that PIDG developed its own methodology to measure mobilisation, which differs from the OECD methodology. PIDG's methodology counts all mobilisation in a project PIDG has closed, which can include other DFI investment that has been mobilised. This differs from the OCED methodology, which seeks to avoid double-counting by attributing mobilisation dependent on the risk taken by the DFI in the investment. PIDG therefore reports higher mobilisation ratios than we have estimated in this study.

strategies, as these shape and drive DFI investment. What is clear is that, seven years into the 2030 Agenda, mobilisation rhetoric in international discourse has been slow to percolate into the studied DFIs' objectives and strategies.

Some of the studied DFIs have a strategic focus on this. DFC and Proparco have 'explicit' mobilisation objectives and quantitative targets. In its Roadmap for Impact 2020 to 2025, DFC seeks to invest $25 billion and mobilise $50 billion in additional capital, although how much of this is private is not clear (DFC, 2020). This is a relatively new objective for DFC as mobilisation was not an explicit aim of its predecessor, OPIC. In its 2017–2020 strategy, Proparco (2017) set itself the objective of mobilising additional third-party capital of €1 billion for the period 2017–2020. However, as in the case of DFC, it is not clear how much of this is private. It is likely that this includes external concessional funds that Proparco can use to blend. Mobilisation is also a strategic priority for FMO, although specific targets had not been set for the period under review. FMO's new strategy – Pioneer, Develop, Scale (FMO, 2022) – commits to increasing its mobilisation of private capital 'by aiming to double this portfolio by 2030'.

For the other studied DFIs, mobilisation is not an explicit objective. For BII, mobilisation was not a strategic priority during the period under review and it has not been identified as an explicit strategic priority in its 2022–2027 strategy (BII, 2021). However, the importance of mobilisation is recognised and BII is currently developing its approach, including the institutional changes required. BII also signalled the need for access to external concessional capital to improve the risk-return profile of investments to pursue this goal. Norfund also mentioned that it had found it a challenge to pursue this objective in its target markets, and it does not see this as its role yet. Norfund claims that, while it has set up a structure to mobilise institutional investors, which secured investment from Norway's largest pension fund Kommunal Landspensionskasse (KLP), it has been difficult to mobilise other pension funds. Mobilisation does not appear to be a strategic priority for DEG as we could find no reference to it in our study of key DEG documents and the website. It does, however, invest 20% of its committed portfolio as at the end of 2020 in private funds, which normally result in good mobilisation potential.

9.6 **Reflections**

In terms of mobilisation approaches, four observations are noteworthy from the study:

1 DFIs tend to rely on traditional loan syndication A/B structures to mobilise, make limited use of guarantees which have high mobilisation potential, and make limited use of structuring

techniques such as securitisations and pooled investment approaches.

2 The use of external funds that offer catalytic capital appears to be an important tool enabling DFIs to develop structures and instruments that have a risk level acceptable to commercial investors.

3 Most of the studied DFIs focus on their role as principal investor rather than as mobilising intermediary, as demonstrated by the limited appetite to manage third-party assets and funds.

4 Few DFIs focus on mobilisation at the institutional level, which has the greatest potential for larger-scale mobilisation (e.g., securitisation of portfolio, use of insurance, debt issuance in capital markets, management of third-party capital).

It is often said that internal incentives frustrate the pursuit of the mobilisation agenda. For example, mobilisation at scale may be at odds with internal incentives based on own-account lending volumes or investment commitments/approvals. Some of the studied DFIs have focused on stepping up their commitment levels rather than prioritising mobilisation, for example in response to capital increases (e.g., BII). The adage ‘what gets measured, gets done’ holds true. We can see that DFIs that have mobilisation as a KPI have mobilisation strategies and are more active in structuring to mobilise.

However, there seems to be a case for more nuanced thinking and approaches to mobilisation and for setting differentiated objectives in different markets, recognising that, in some markets, it may be more challenging to mobilise commercial private investment at scale, at least in the short term. In these markets it will be important to better understand and measure the market creation effects of DFI investment, which can establish the conditions for much greater commercial mobilisation down the line.

DFI mobilisation is an area where there is a large research and evidence gap. Further study is required and DFIs must provide more transparent and comparable data to enable analysis and research which can inform DFI objective-setting and mobilisation approaches, as well as help develop a collective understanding of the relationship with development impact. DFIs must publish their mobilisation data at the project level using both the OECD and MDB and DFI methodologies.

10 Shareholder policy issues, concluding reflections and recommendations

This final section steps back from the preceding technical analysis and reflects on what this all means for DFI country shareholders. As mentioned in the Introduction, DFIs are now expected by their shareholders and stakeholders to have a much broader and deeper range of development impact beyond job creation. They are expected to mobilise much-needed private capital at scale to help close the SDG financing gap and make transformative investment to pioneer and create new markets, especially in the poorest geographies, while at the same time remaining financially sustainable.

It is important for shareholders to recognise some of the inherent tensions between these ‘asks’, especially in the poorest countries, where these tensions may be apparent and hold true at least in the short term; and consequently, for shareholders to set differentiated objectives in different markets for their DFIs. The relative emphasis placed on these different ‘asks’ varies by DFI and shapes how individual DFI business models evolve. That said, at the core of achieving these ‘asks’ is the primary need to increase the level of high-risk investment to: (i) step up investment in the poorest countries; (ii) create and pioneer new markets; and (iii) increase the use of structuring techniques which can better mobilise private finance at scale.

DFIs will no doubt come under increasing pressure to step up their efforts in pursuit of these ‘asks’ in the coming years. Accordingly, we identify three pertinent DFI policy issues that we think country shareholders will be interested in, as it is often assumed that increased pursuit of these ‘asks’ requires new capital injections and/or increased use of donor external concessional finance, much of which can now be counted as ODA. Whilst this is true to some extent, it is critical that DFIs make the best use of their existing capital to minimise any further fiscal cost in pursuit of these agendas, and to ensure that value for money of public capital invested in this

way is maximised. This is even more important in a fiscally constrained environment where ODA budgets are under pressure. Indeed, ODA budgets were cut in 2021 in several countries whose DFIs we have studied, e.g., the Netherlands (-7.2%), Norway (-11.6%) and the UK (-21.2%) (OECD, 2022).

We offer our observations on these three policy issues drawing on the preliminary technical analysis presented in this paper. In offering our observations, we remind the reader that the qualitative reflections that follow are tentative due to data limitations. Further data and study would be required to understand and model these issues more concretely, especially from a quantitative perspective. Throughout the study we have identified where further analysis is required. Our reflections are presented here to stimulate and facilitate discussion between DFIs and their shareholders.

10.1 Increasing the level of high-risk investment in a fiscally constrained environment

As noted, generally investments that have higher development and financial additionality tend to be higher risk. Here and in previous research (Attridge and Engen, 2019; Grimard and Novak, 2019; Attridge and Gouett, 2021), we have noted the need for DFIs to increase their levels of high-risk investment. We believe that the DFIs should increase their focus on the following areas, which would require taking additional risks and result in the potential for higher development and financial additionality: (i) support of sectors that are highly developmental and in high need of funding (e.g., infrastructure development and direct financing to medium-sized enterprises); (ii) support of geographies that are especially underdeveloped and with relevant financial gaps (e.g., LDCs); (iii) use of high-risk financial instruments, including equity and quasi-equity; and (iv) use of de-risking financial instruments, including guarantees and credit insurance.

General observations

We find that, to varying degrees, all our studied DFIs can potentially increase their risk appetite and their levels of high-risk investment in the above areas without adversely impacting the business model, recourse to new funding and/or use of donor concessional finance.

Specific observations

- We observe that Norfund, DFC and DEG take a level of risk that has the potential to result in high additionality. For BII we note its high use of equity, which has the potential to result in high additionality, but observe that the level of risk in the portfolio may not be as high as it could be. FMO and Proparco seem to be taking a lower level of risk.

- The experience of BDMG, GuarantCo, Norfund and TDB implies that DFIs can undertake increased levels of higher-risk investment than that which is currently observed for our other studied DFIs (e.g., higher investment in higher-risk sectors and geographies and higher levels of risk capital deployed) and that this is compatible with profitability mandates.
- For FMO we observe an extremely conservative approach to risk appetite, capital adequacy and liquidity, setting a self-imposed AAA credit rating. Likewise, we believe there is potentially room for Proparco, which targets an AA rating, to increase its risk appetite. Both institutions seem to exceed the requirements for such rating levels.
- The experience of TDB, BDMG and GuarantCo, which are rated institutions, also leads us to question the value of FMO targeting a self-imposed AAA rating and Proparco targeting an AA rating. These ratings require these institutions to sustain levels of risk, capitalisation and liquidity that ensure an almost zero risk of default on their financial obligations. Relaxing these ratings could enable FMO and Proparco to increase their risk appetite and their investment volumes.
- All DFIs can learn from the risk management approach of TDB, which enables it to make higher levels of high-risk investment and mobilise private capital into its funding structure.

Recommendations

Shareholders of BII, FMO and Proparco should open a conversation on risk appetite and risk management to better understand the current headroom to increase the level of risk in their respective investment portfolios.

FMO and Proparco and their shareholders should open a conversation to explore the risks and opportunities of targeting a lower credit rating than AAA and AA respectively.

All DFIs have room to increase the risk in their portfolios. This would require the implementation of risk management best practices that are applied in mainstream financial markets, in alignment with the necessary level of risk to achieve developmental objectives and implementing: (i) appropriate risk governance; (ii) reasonable self-imposed ratings when applicable (and without exceeding the corresponding rating-level requirements); and (iii) effective use of capital.

10.2 Increasing investment volumes in a fiscally constrained environment

The studied DFIs have all grown their investment portfolios during the period 2017–2020, some significantly (BII and Proparco). However, we observe that this growth may not be sustainable without adjusting their business model.

General observations

We believe that DFIs should use their own balance sheets more effectively, which would provide the potential for increasing their portfolios and the level of risk taken, without the need for new capital injection in the first instance. The studied DFIs overall present limited to no leverage through debt directly issued in the market, high capital adequacy ratios and excessive liquidity levels in some cases, revealing that there is a missed opportunity to increment the size of portfolios, take additional risks and increase capital mobilisation from various sources. In this regard, the study indicates that the DFIs' overall approach to financial and risk management does not completely adopt practices in the mainstream banking sector.

While recent net losses among most of the studied DFIs may be down to circumstances, and we understand that DFIs as public institutions may decide to function under low profitability levels, the basic practices expected of any FI are to operate under reasonable cost structures, to apply appropriate pricing approaches and to support projects that demonstrate acceptable financial profiles (regardless of the level of risk taken). The study identifies possible oversized cost structures (except for Norfund), a lack or ineffective use of pricing models and potentially weak approaches to equity investments. Consequently, the DFIs' profitability might have been lower than what could have been feasible, limiting their investment capacity, risk-taking level and utilisation of their capital base.

Specific observations

- Given the scale of the challenge ahead, we question the missed opportunity of BII, DFC and Norfund to mobilise significant volumes of private capital into their balance sheets. BII's recent growth has been funded by significant capital injection (counted as ODA), as well as in the case of Norfund but to a lesser extent. Given ODA budget cuts in the UK and Norway, we believe there is value in exploring the risks and opportunities of allowing these DFIs to issue debt and leverage their balance sheets (albeit not targeting a AAA rating).
- We observe FMO's extremely conservative approach to leverage, capital adequacy and liquidity, which in addition seems to exceed the requirements of a AAA rating.

- In relation to DEG and Proparco, the study has not assessed the degree of the use of capital by the corresponding groups of which they are part. However, under the hypothetical scenario that DEG's current debt financing (entirely provided by KfW) would instead be represented by debt raised in the market, its leverage would be even lower than FMO's.
- All DFIs could learn from TDB's effective management of its capital through innovative balance sheet operations. These are driven by TDB's financial risk management approach to optimise the use of its capital and meet prudential limits.

Recommendations

Shareholders of BII, DFC and Norfund should explore the risks and opportunities of allowing these DFIs to issue debt and leverage their balance sheets.

FMO should calibrate its level of leverage, capital and liquidity in consideration of a revised rating level (per our recommendation in the previous sub-section) or at least without exceeding the requirements of a AAA rating.

DEG and Proparco should explore with their corresponding controlling entities options to raise debt in the market under DEG and Proparco's balance sheets and other ways to make more effective use of their capital.

10.3 Increasing the mobilisation of private finance

Mobilisation is a critical agenda as it is the only way to generate the sufficient scale of capital required to support the attainment of the SDGs. However, progress with this agenda has been disappointing. This should now be a critical policy issue for shareholders and DFIs given today's scissor effect in development finance.

General observations

Seven years into the 2030 Agenda, mobilisation ratios and levels are low, reflecting the fact that international ambition has been slow to percolate into the objectives and strategies of the studied DFIs. Our DFIs focus mainly on their role as a principal investor, rather than a mobilising intermediary. As such, we observe a reliance on traditional approaches, limited use of structuring techniques, limited appetite to manage third-party assets and funds, and limited use of instruments such as guarantees, which have high mobilisation potential.

There also seems to be a case for more nuanced thinking and approaches to mobilisation and for setting differentiated objectives in different markets. The latter should recognise that, in some markets,

it may be more challenging to mobilise commercial private investment at scale, at least in the short term.

Specific observations

- Mobilisation ratios for BII, DFC, Norfund and Proparco are low (ranging from 0.1 to 1.5 during the study period), especially when compared to catalytic impact funds which typically leverage three to four times their catalytic capital. We have not been able to estimate for DEG and FMO due to data limitations.
- DFIs that have a strategic focus on mobilisation (e.g., that have 'explicit' mobilisation objectives and quantitative targets) are more active in structuring investment to mobilise (e.g., DFC, FMO and Proparco), although where data is available mobilisation ratios appear low. Other studied DFIs have not yet identified this as an explicit strategic priority. BII is currently developing its approach, but it is not a strategic priority in the new strategy for 2022–2026.
- Internal incentives which focus on investment volumes committed or approved are in tension with mobilisation objectives, especially where deal flow is more limited.
- TDB is focused on an 'originate to distribute' model supported by innovative balance sheet operations. DFIs and their shareholders should reflect on TDB's practices, which present effective approaches to capital mobilisation into and outside its balance sheet.
- There is a complete lack of transparency in mobilisation data, hindering accountability and analysis of effectiveness, and ultimately thwarting effective policy-making.

Recommendations

Shareholders should set mobilisation as a strategic priority for their DFIs (including differentiated mobilisation objectives in different markets). DFIs should develop mobilisation strategies, set associated KPIs and undertake more active structuring to mobilise.

DFIs and their shareholders need to review internal implicit and explicit incentives to ensure they are aligned with strategic priorities on mobilisation.

DFI shareholders should ensure that their DFIs publish consistent and comparable disaggregated mobilisation data by project, using both the MDB and OECD methodologies.

10.4 Elevating governance to better practices

The governance of DFIs is a key determinant of their approach to taking risks, offering financial products that can result in high additionality, maximising capital utilisation, attaining a reasonable cost structure and profitability, and mobilising capital.

General observations

A cursory look at the governance of the studied DFIs suggests that they do not seem to be entirely aligned with governance best practices in some key areas, which may explain the policy issues described here and in previous sub-sections. The capacity and practices of internal controls seem overall to be particularly insufficient.

Specific observations

- All of the studied DFIs have a single controlling shareholder, including in cases where there are multiple shareholders (i.e., FMO and Proparco). While the study recognises the existence of 'independent' members within the Boards, the influence of the controlling country shareholders might limit the benefits that multiple shareholders and/or independent Board members would normally bring to a non-DFI.
- We cannot conclude from the analysis that the DFIs' corresponding Board members in aggregate possess the necessary backgrounds and experience to contribute to proper governance.
- Examples of identified deviations from usual governance practices are: (i) DEG's Internal Audit does not report to the Board but to the CEO; (ii) FMO and DEG have small Senior Management Teams composed of three executives, and DEG's CRO does not report to the CEO; (iii) Norfund's CRO position is combined with other functions including finance and human resources; and (iv) we note that BII and DFC did not have a CRO position until recently (incorporated in 2020).

Recommendations

Shareholders should consider: (i) increased contributions from independent Board members, possessing applicable skills and expertise; (ii) strengthened practices around internal controls, especially in relation to independence; and (iii) more effective checks and balances, with improved practices in relation to processes and to the organisational positioning and authority of the following bodies: internal audit department, CRO, CFO, risk management committee and independent mechanisms.

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